Attachment, Dissociation and Social Support

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I declare that this thesis is all my own work.

Contents

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Abstract

Whilst transient dissociative states are commonplace in the face of overwhelming traumatic events, long-standing dissociative phenomena are also frequently reported in adults who have childhood histories of severe sexual or physical abuse. Dissociation itself may take a number of forms, including isolation, absorption, fragmentation and memory disturbance: the relative importance of environmental and personality variables in determining an individual's "style" of dissociation is unclear, although there is good evidence for a cumulative effect, such that dissociation in the face of trauma is most frequent in individuals who have also suffered childhood abuse. Bowlby's attachment theory may help to explain the relationship between social support, dissociative phenomena and traumatic events in childhood and adulthood. Attachment theory is a theory of affect regulation which proposes that individuals make use of social and cognitive strategies in their attempts to manage negative affect. These strategies are thought to be selected on the basis of an individual's childhood experiences with caregivers and are maintained through the operation of relatively stable "internal working models". Social support is widely cited as a protective factor mitigating against the development of psychopathology following exposure to trauma, but it is unclear whether social support directly protects against the effects of trauma, or whether both perceived social support and adaptation to trauma reflect underlying attachment patterns, as suggested by attachment theory.

This thesis examines the relationship between attachment pattern and (i) tendency to experience particular dissociative states and (ii) use made of available social support. Two groups were recruited. These were (i) control subjects with no history of treatment for psychological problems, and (ii) out-patient psychology department attendees with a broad range of psychological problems.

Measures of attachment, social support, dissociation, exposure to life events and mood were administered. The results are presented and discussed in light of current theories of attachment, social support and dissociation.

Introduction

The aims of this thesis are threefold:-

- firstly, to examine the relationship between attachment pattern and dissociation in clinical and non-clinical populations;
- secondly, to examine the relationship between perceived social support and attachment pattern;
- and finally, to investigate the way in which attachment pattern and social support influence outcome following a traumatic event.

The relationship between attachment pattern and dissociation: Attachment pattern has been shown to be related to the occurrence of particular dissociative states in a non-clinical population (Coe, Dalenberg, Aransky & Reto, 1995). However, this work has not been replicated with a clinical sample.

Perceived social support and attachment pattern: Whilst attachment theory predicts differences in both cognitive and social strategies for managing negative affect, studies examining the relationship between dissociation and attachment have not proceeded to examine social support. It is argued here that, from an attachment perspective, cognitive and social strategies would be expected to complement each other, and should therefore be studied as "two sides of the same coin".

Attachment pattern and outcome following a traumatic event: Attachment theory suggests that a healthy response to trauma is the seeking out of a "secure base" in whose company one can begin to make sense of the traumatic experience and its effects (Bowlby, 1988). Less healthy responses include attempting to deal with the event without any assistance from attachment figures, and becoming overly dependent on the presence of attachment figures for a feeling of safety. There is reason to suppose from a theoretical viewpoint, therefore, that attachment pattern may predict

aspects of perceived social support, which is itself believed to play a part in adjustment following trauma (Perry, Difede, Musngi, Frances & Jacobsberg, 1992; Joseph, 1999).

Operational Definitions

Attachment is operationally defined as an aspect of a close and enduring personal relationship characterized by the provision of care. In this paper, a four category model of attachment is employed, in line with the findings of Bartholemew & Horowitz (1991), to be reviewed later.

- A *secure attachment pattern* is defined as one in which an individual possesses positive internal working models (Bowlby, 1969) of self (as loveable) and others (as trustworthy and reliable). Behavioural correlates of secure attachment are proximity seeking, separation protest and the "secure base" phenomenon.
- *Avoidant attachment* results from a positive model of self in combination with a negative model of others. Avoidant attachment is recognizable through the individual's reluctance to seek out attachment figures in times of crisis.
- *Preoccupied attachment* is characterized by a negative model of the self and a positive model of others. Behavioural correlates of preoccupied attachment are proximity seeking and separation protest combined with impaired exploration of the environment.
- Finally, *fearful attachment* is the product of negative models of self and others. At the behavioural level, there appears to be no unique set of identifiers, but there is evidence to suggest that fearfully attached individuals share a lack of any coherent strategy for managing negative affect (Radke-Yarrow, Cummings, Kuczynski & Chapman, 1985).

Dissociation is defined in DSM IV as "a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment" (American Psychiatric Association, 1994). Although this definition is not without its problems, which will be discussed later, the essential idea of a disruption of integrated function is fairly well accepted.

However, such disruptions can take several forms. In this thesis dissociation is defined as a disruption of integrated function characterized by one or more of the following:

- **memory disturbance**, in which memory for particular events is absent or partial to a greater extent than can be explained by usual forgetfulness;
- **depersonalization**, in which the individual loses the sense of continuity of self;
- **derealization**, in which the environment is perceived as in some way unreal;
- **isolation**, in which the person's attention is focussed on internal events at the expense of awareness of the external environment;
- and finally, **absorption**, in which the person becomes caught up in events in the environment, and in so doing is unable to switch attention to his / her internal state.

Cardena (1994) identifies three ways in which dissociation has been defined in the clinical literature. Firstly, dissociation describes "semi-independent mental modules or systems that are not consciously accessible, and/or not integrated within the person's memory, identity or volition. Second, dissociation is viewed as representing an alteration in consciousness wherein the individual and some aspects of his or her self or environment become disconnected or disengaged from one other. And third, dissociation is described as a defense mechanism that effects such disparate phenomena as non-organic amnesia, the warding off of current physical or emotional pain, and other alterations of consciousness" (Cardena, 1994).

Social support is operationally defined as the perceived existence of an interpersonal environment which facilitates discussion of emotionally significant events and the expression of emotions. This paper focuses on *perceptions* of and attitudes to social support, rather than actual received support, because there is evidence to suggest that there is little correlation between perceptions of received support and actual provision of support (Henderson, 1981). In addition, a distinction is drawn between social-emotional support and social-practical support. In this thesis the emotional aspects of social support are of interest because of the impact which pattern of attachment may have on such support. Practical support may be provided by someone who is not in a close or enduring personal relationship to the receiver of the support; for example, a by-stander may provide first-aid assistance to an injured person with whom the by-stander has no emotional relationship. Issues of attachment would not be expected to play a part in such transactions.

The brief operational definitions offered above represent an attempt to describe succinctly what are in fact three large areas, each of which continues to generate much debate. These are now reviewed in greater detail.

Attachment

Attachment theory (Bowlby, 1969, 1973, 1980) is a theory of affect regulation. It proposes that the quality of relationships between an infant and its primary caregivers results in the development of "internal working models" of self and others which dictate how an infant subsequently manages strong states of negative affect. A number of variants of the basic theory exist, but common to all of these variants is the hypothesis that the infant has a *primary interest* in maintaining a social relationship with its caregivers. Attachment theorists propose that as the infant develops cognitively it builds "internal working models" of its self and its attachment figures based on the information available to it from its relationships with primary caregivers. These models underlie the various

strategies – social, behavioural, cognitive – which the developing child begins to use when faced with strong negative affect.

The roots of attachment theory Attachment theory was developed largely by John Bowlby and Mary Ainsworth in the 1940's and 1950's. Although psychoanalytically trained, Bowlby was unhappy with the scientific status of classical psychodynamic and object relations theory, which relied largely on interpretation of infant behaviour and the inferring of mental states from these behaviours. This concentration on the infant, rather than the infant-caregiver dyad, led early psychodynamic theorists to believe that instinct was a primary shaper of infant behaviour. In particular, an erotic instinct was postulated to account for the child's attachment to its caregiver: the relationship between the infant and its caregiver developed because the infant was able to meet its instinctual erotic needs through feeding at the breast. In the same way, psychological problems in childhood tended to be related to the child's intrapsychic fantasy about its parents rather than to the actual quality of the parent-child relationship. Freud's abandonment of his early belief in the prevalence of sexual abuse amongst his patients, in favour of the theory of fantasy-driven wish-fulfillment, is one example of this trend. Object relations theory (Klein, 1948) put more emphasis on the quality of the infant's relationship with its caregivers, but continued to emphasize the role of psychic fantasy and the developmental importance of primitive forms of thinking such as splitting and projection.

The traditional emphasis on intrapsychic fantasy did not go unchallenged. Winnicott, who was by training a paediatrician, was careful to note the role of the mother on the infant's development:

"if you show me a baby, you certainly show me also someone caring for a baby, or at least a pram with someone's eyes and ears glued to it; one sees a "nursing couple" (Winnicott, 1964).

In the same way, Bowlby sensed the importance of real-life events such as separations occasioned by admission of mother or child to hospital (Robertson, 1952), and was therefore dissatisfied with

the nature of contemporary psychoanalytic practice, in which interpretations of individual experience were arrived at without necessarily making reference to the historical facts of a patient's life (see Stevens (1998) for a discussion of three paradigms of psychotherapy: "nomothetic" (natural science model), "hermeneutic" (interpretative model), and "transformative" (therapaies based on self awareness, existential). Bowlby also argued that psychoanalysis showed an excessive interest in the internal psychic life of the infant at the expense of the infant's external environment.

Outside the psychoanalytic world, other influential models of psychology included behaviourism and the newly-emerging field of cognitive science. Behaviourists believed that the infant's relationship with its caregivers developed through a process of reciprocal reinforcement. The successful caregiver decoded an infant's signs of distress appropriately, and ensured that the infant's needs were met. By feeding the infant when it was hungry, promoting a suitable environment for sleep when it was tired, etc. the caregiver provided a schedule of reinforcement to the infant. In return, facial expressions and vocalizations of the child act as reinforcers to the parents' proximity-seeking. Whilst such a paradigm had the advantage of parsimony, it was too simplistic for Bowlby who, despite his reservations about aspects of psychoanalysis, remained committed to the psychodynamic endeavour in principle.

Cognitive science was a newly emerging field which, in its emphasis on representation, had the potential to capture some of the richness of psychoanalytic theory whilst maintaining a scientific basis. Ethology was also of interest to Bowlby for similar reasons: it takes an empirical approach to the behaviour of organisms in their natural environments. As such it seemed a powerful research tool for the study of infant-caregiver behaviour. With these and other paradigms in mind, Bowlby set about re-writing psychodynamic theory. The result was attachment theory, which borrows from a number of disciplines, including cognitive theory, psychodynamic theory, cybernetics, and – perhaps most importantly – ethology.

Ethology represents an advance on theories based on instinctual drives in that it proposes a level of behavioural organization which explains the occurrence of a range of discrete behaviours.

A second advantage of the ethological approach is that it involves the study of organisms in their natural environments, and in this respect it differs both from psychodynamic theory (which derives from the study of clinical populations in the artificial environment of the analyst's office) (Holmes, 1993) and the early behavioural theories (which were built upon the behaviours of organisms in controlled experimental conditions) (Hinde, 1982). Ethological theory proposes that the behaviours of an organism in its natural environment can be understood as expressions of particular behavioural systems. These might include a feeding system, a reproductive system, a territorial system, etc. In the case of the feeding system in a predator, hunger results in increased activity directed towards gaining food: the feeding system is composed of a number of feeding behaviours – seeking out prey, predatory behaviour once the prey has been located, and the behaviours associated with feeding once the prey has been caught. Hinde (1982) describes a number of behavioural systems (incubation, escape, preening) in the herring gull and shows how they might relate to each other. He observes that behaviour systems act to mutually suppress one another: in other words, they are temporarily elicited by particular stimuli, and are then "switched off" when those eliciting stimuli are no longer present. Given that the organism is always subject to stimuli, the switching off of one behaviour system clears the way for the switching on of another behaviour system, elicited by the stimuli which are currently salient in the organism's environment. The attachment system is seen by Bowlby as one such behavioural system, the advantage of which in evolutionary terms is that it promotes an individual's survival. The young of a species are particularly vulnerable, and it is here that attachment is most clearly observed, although the attachment system is considered to be important over the course of the life-cycle. *Attachment behaviours* in early childhood are generally elicited by novel situations where the infant finds him /herself alone. The behaviours include vocalizations, the evolutionary purpose of which is to alert the caregiver to the absence of the infant;

and orientating or moving towards the caregiver, the evolutionary purpose of which is to gain proximity and security. Bowlby (1977) summarizes attachment behaviour as behaviour which results in "proximity to some other differentiated and preferred individual, who is usually conceived as stronger and / or wiser". Attachment behaviours change over time. For example, an infant orientates gaze to the caregiver, whilst a toddler moves towards the caregiver. In adulthood, the need for actual proximity is reduced because the adult is able to hold, for a period of time, a cognitive representation of the attachment figure. (Even at this level, however, it is important for the adult to have confidence that the attachment figure is, in principle, available in more than symbolic form.) Therefore, whilst the particular attachment behaviours are related to the developmental stage of the individual, they continue to serve the same psychological function and are therefore seen as constituting the attachment behaviour system as it is expressed at any point in an individual's life cycle.

This stable aspect of attachment, termed the *attachment behaviour system,* consists of the discrete attachment behaviours related in such a way as to ensure that the goal of the system is met. Thus, a behaviour system is an explanatory concept, but one which is based on observable lower-level behaviours. Bowlby sees the attachment behaviour system as being activated in certain circumstances, for example, separation from the caregiver, and de-activated in other circumstances, such as reunion with the caregiver or, alternatively, following a prolonged period in which attachment behaviours have not resulted in the desired reunion. In early childhood, the exploratory behaviour system is most likely to be activated following the de-activation of the attachment system, so that the child, once reassured of the availability of its secure base, is able to resume the major task of childhood: exploring and developing mastery of its environment.

Finally, *attachment* refers to a particular kind of relationship characterized by the provision of a secure environment by one individual to another; for example, the task of the caregiver in an infant-

caregiver dyad is to provide a secure environment to the infant. In adult romantic relationships, there is ideally a mutual exchange of emotional support, although some adult relationships are characterized more by a one-sided giving of support. Attachment relationships are therefore recognizable by the attitudes of the individual who is in need of support: that the other is a "preferred individual, who is usually conceived as stronger and / or wiser" (Bowlby, 1977).

As stated earlier, Bowlby argued that attachment systems have developed in order to promote the survival of an individual. In humans this includes not only physical survival but also psychological "survival". For Bowlby, psychological well-being is intimately tied up with the quality of close relationships. Emotional adjustment to distressing or traumatic events is therefore largely dependent on the way in which the individual makes use of his or her attachment figures.

Descriptions of attachment patterns Whilst debate continues about the precise classification of attachment patterns, a consensus seems to be emerging on the existence of four attachment patterns (Feeney & Noller, 1996). Qualities of the infant-caregiver relationship which give rise to these patterns of attachment are now described.

Secure attachment: In the days and weeks following birth, all infants react to distress by displaying attachment behaviours such as crying and attempting to locate the caregiver. These behaviours, strongly elicited by periods of separation, are considered to be instinctive by Bowlby. The majority of caregivers are sufficiently attuned to these cues (i) to recognize that they are indicative of distress in the infant, (ii) to provide reassurance through proximity, vocalization and touch, and (iii) to ensure that biological and socio-emotional needs are fulfilled. Provided that the infant's distress is recognized and reacted to reasonably reliably (Winnicott's "good enough mother": Winnicott, 1957) the infant begins to build confidence in the ability of the caregiver to recognize and fulfill its needs. Alongside this confidence in the attachment figure develops a sense

of the infant's being loved. Finally, the infant's expectations of the relationship are positive. The infant's models of itself, its attachment figures and its relationship to them might be summarized as follows:

"When I exhibit signs of distress, my reliable caregiver will look after me because I am worthy of being loved".

Of course, these models are pre-verbal and it is therefore reasonable to suppose that the schemata are organized on affective rather than cognitive lines initially. For example, a securely attached infant may feel and show signs of distress *without* a felt sense of shame, and this affective pattern may distinguish it from insecurely attached infants, who may experience negative affective states such as shame or anger secondary to their expression of distress.

Avoidant attachment: As a contrast to secure attachment, let us now consider a particular type of insecure attachment: avoidant attachment. Again, this concept will be reviewed in greater detail at a later stage, but will be presented in outline here as an example of the way in which potentially maladaptive strategies for managing negative affective states may arise in infancy and early childhood. As stated above, all infants react to distress in earliest infancy by crying and attempting to locate the caregiver. If the caregiver is generally unavailable or is unable to provide sufficient reassurance the infant's attachment behaviours will serve no useful function and in time the infant will learn to manage negative affect as best he can. Because of the infant's relative lack of cognitive development, immature cognitive strategies are likely to come into prominence. One such strategy is that of "defensive exclusion", whereby negative affective states are excluded from conscious awareness. This serves to protect the infant from otherwise unbearable negative affect. As to the infant's representation of its caregivers, it is likely to build a model of attachment figures whereby they are seen as unreliable. The infant's repeated experience of being abandoned to its anxiety is likely to give rise to fear that others are unable to meet its needs for reassurance. However, the

same caveat applies to the nature of the model: it is an affective rather than a cognitive model. Nevertheless, the avoidant infant, were he able to verbalize his schemas, might say:

"I cannot allow myself to be distressed, therefore I will refuse to feel anxiety, and consequently I will not need the reassurance of (unreliable) attachment figures."

Note that this affective style has implications for the quality of experience associated with distressing events, in that the avoidant infant may refuse to recognize the affective quality of such events. In adults, such a response is variously labelled "constricted affect", "affective blunting" or "numbing" and is often found in the immediate aftermath of a traumatic event. Of particular interest is the finding that continued affective blunting following a trauma is predictive of poor psychological outcome (Perry, Difede, Musngi, Frances & Jacobsberg, 1992;). At the behavioural level, we might also expect such adults to avoid stimuli which would bring about negative affective states, and again we find that following a trauma avoidance is a common reaction, but also that the persistence of avoidance is predictive of poor psychological adaptation (McFarlane & Girolamo, 1996). In summary, avoidance of cues in the aftermath of a trauma becomes pathological only when it develops from a state into a trait.

Preoccupied attachment: The relationship between an anxiously attached (preoccupied) infant and its caregivers is thought to be characterized either by intrusive caregiving or by caregivers who are insufficiently reliable in their caregiving. Intrusive caregivers offer their infants "too much" protection and thereby inhibit the infant from exploring and mastering its environment. By preventing the occurrence of distress, caregivers deny their infants the opportunities which would enable them to learn to manage "measured doses" of distress independently. Such infants are therefore likely to become overly reliant on attachment figures when faced with distressing events. Their affective model, stated in linguistic terms for convenience, might run as follows:

"My attachment figures do not allow me to become distressed or to explore my environment because I am completely incapable of managing the hazards of daily life. Therefore I must never stray far from my secure base."

Adults who hold such a model are likely to monitor their environments for signs of danger and themselves for any sign of negative affect, and, when they find it, to seek out their attachment figures at the first opportunity. Faced with an inescapable traumatic event, such adults, it is hypothesized, are likely to be hyper-vigilant to the environment, perhaps becoming absorbed in the events around them. This tendency can be seen as a form of dissociation in which the psychological "barrier" between the individual and the environment is temporarily broken down.

In the case of infants whose caregivers are inconsistent in their caregiving, a slightly different model is likely to arise, roughly summarized as:

"My attachment figures are inconsistently available, so I must take care never to stray far from them".

In behavioural terms, both models are likely to give rise to similar forms of behaviour, with excessive emphasis being placed on ensuring proximity to, or excessive reliance upon, caregivers.

Fearful attachment: Finally, fearful attachment is characterized by severe emotional or physical abuse or severe neglect at the hands of the infant's attachment figures. The infant's model of attachment figures will clearly be negative, as will its model of itself, but because relationships are at the heart of the infant's life, it cannot choose not to be attached. When faced with distressing events it will find itself in what Liotti (1992) terms the "paradox that cannot be solved". Disorganized and contradictory behavioural responses are likely to follow, with extreme forms of dissociation being employed as primitive defenses against anxiety.

Empirical Studies of Attachment

The above descriptions of attachment patterns rest on two sets of assumptions. Firstly, attachment is seen as a categorical feature of personality organization. Secondly, attachment is assumed to be a

relatively stable construct. Particularly in his early writings, Bowlby believed both that attachment was a categorical rather than continuous feature of personality and that attachment patterns were relatively stable. But what is the empirical evidence for these assertions?

Classification of Attachment Patterns: In his early writings, Bowlby suggests that the behaviour which internal working models generates may in turn reinforce these internal working models: for example, a belief that "others are unreliable" leads the individual toward compulsive self-reliance and away from potentially helpful interactions with others which would lead to revision of the working model. If this is the case it follows that an individual will tend to adopt a particular attachment pattern to the exclusion of others.

The earliest empirical investigations of attachment are those of Ainsworth & Wittig (1969), in which observations of infants' behaviour in a carefully controlled set of situations (the "Strange Situation") are used as the basis of classification. Dependent variables were derived from the infants' signs of distress on separation, in line with early attachment theory. Three major groups were identified. Group A corresponds to a pattern of avoidant attachment, with members of this group exhibiting relatively less distress upon separation than members of the remaining groups. Group B infants, corresponding to a pattern of secure attachment, "showed clearcut separation anxiety, but (their) behaviour retained some adaptive quality, which tended to break down only under cumulative stress" (Ainsworth & Wittig, 1969). Finally, Group C infants (anxious attachment) "manifested clearcut separation anxiety, but (their) behaviour showed maladaptive features of one kind or another" (Ainsworth & Wittig, 1969). This seminal study suggested three basic patterns of attachment, although the authors noted that sub-groups existed within two of the main classifications. Thus, in Group B, the secure group, two sub-groups were identified, one of which contained infants who "were disturbed in the first separation, but who showed strong regain behaviour in both separations and also some positive response to the stranger who tried to comfort

them" (Ainsworth & Wittig, 1969). The other sub-group "showed relatively little disturbance [in the first separation], weak regain behaviour, and some ability for positive interaction with the stranger, but ... in the second separation episode, showed marked disturbance" (Ainsworth & Wittig, 1969). These children were classified as secure, although there is a case for regarding them as avoidantly attached on the basis of the first separation. Moreover, such behaviour raises the possibility that attachment behaviours are best thought of as continuous rather than categorical, a possibility which is not addressed by the authors.

In Group C (the anxiously attached group) the authors identify two sub-groups. One appeared "very baby-like and helpless", whilst the other consisted of infants "who, although certainly not helpless, behaved less adaptively than the children of Groups A and B" (Ainsworth & Wittig, 1969). Those attachment theorists who prefer a four-category model of attachment may have considered the baby-like and helpless infants of Group C as properly belonging to the disorganized/fearful category of attachment.

This brief review of the Strange Situation already demonstrates some of the problems of classification. Firstly, both the number of categories and classification between categories may depend on the variables which are used as measures of attachment. Secondly, individuals may span more than one pattern of attachment, introducing the possibility that attachment patterns are best thought of as continuities rather than categories.

Subsequent models of child-parent attachment have proposed a fourth attachment pattern. Main and Solomon (1986) term this pattern "A-C", reflecting the apparent combinations of attachment behaviours drawn from Ainsworth's avoidant (A) and anxious (C) attachment patterns. Essentially the same constellation of responses has been observed by Radke-Yarrow et al. (1985), who termed this pattern "disorganized-disoriented attachment", (Radke-Yarrow et al., 1985). What is most

notable about these children is the lack of a coherent strategy for managing separations from and reunions with their caregivers; the precise behaviours of these children, however, are idiosyncratic.

Whilst the Strange Situation is an appropriate method for assessing infant attachment, it is clearly inappropriate for assessing attachments in older children and in adults. Attachment theorists argue that attachment remains an important aspect of human relationships throughout the life cycle, but that the way in which attachment behaviours are manifest is related to the individual's developmental stage (Parkes & Stevenson-Hinde, 1982; Holmes, 1993, pp. 103-24). This being the case, researchers have increasingly turned their attention to ways of measuring attachment in these age groups.

Measurement of Attachment throughout the life cycle: Bowlby argued that attachment remained a crucial organizer of emotion and social behaviour throughout the lifespan. Attempts to measure attachment must, however, take into account the stage of development of the population being studied, whilst not confusing developmental competencies with behaviours which are specifically attachment related. Infant attachment is generally measured by means of direct observation of the infant-caregiver dyad and in particular of the infant's reaction to separation and reunion. Such an approach is clearly inappropriate both for older children and for an adult population, in which is assumed a capacity for symbolic representation of attachment figures. Approaches for studying adult attachment are therefore based on the adult's verbal description of aspects of close relationships – comfort with intimacy, concern about possible loss of the attachment figure, and so forth.

The most sophisticated measure of adult-parent attachment is the Adult Attachment Interview, a semi-structured interview which makes use of psychotherapeutic techniques which are designed to "catch the unconscious off guard" (George, Kaplan & Main, 1985; Main & Goldwyn, 1989).

Attachment classification is decided with reference to both the content of respondents' replies and the way in which respondents are able to discuss childhood events; for example, an inability to recall specific emotional events combined with a tendency to idealize childhood years is held to be indicative of avoidant attachment, whilst evidence of continuing preoccupation with conflictual aspects of the child-parent relationship is considered as indicating an anxious attachment style.

Such a measure offers possibilities for fine-grained qualitative analysis, but is rather unwieldy for use in quantitative research. Therefore, simpler measures have been devised, some of which are designed to tap early attachment by means of retrospective reports, and some of which attempt to measure current attachment.

Parental Bonding Instrument: The Parental Bonding Instrument (PBI; Parker, Tupling & Brown, 1979) (see Appendix 1) is a 25 item retrospective measure of the respondent's relationship to each of the parents in the first 16 years of life. This measure gives rise to two factors, described as "care" and "over-protection". Examples of the "care" factor items include *"Enjoyed talking things over with me"* and *"Spoke to me with a warm and friendly voice"*. Examples of the over-protection factor include *"Invaded my privacy"* and *"Felt I could not look after myself unless she/he was around"*.

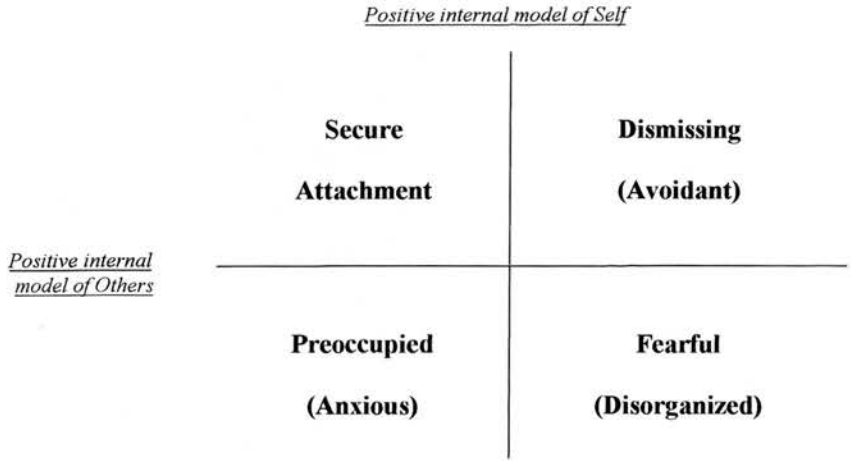
The authors note that scores on each of the factors were not correlated with the respondent's age, suggesting that despite its retrospective nature the PBI was a valid measure of early experience. Additionally, Brewin, Andrews & Gotlib (1993) have suggested that retrospective measures are perhaps more robust than was previously believed, particularly when specific rather than global questions are used in the measure.

In addition to its psychometric properties, which will be discussed in the Methodology, the Parental Bonding Instrument has been widely used in research, and for these reasons was selected in the present study as a measure of early attachment.

Measures of adult attachment Hazan & Shaver pioneered the use of such measures (Hazan & Shaver, 1987) with their forced choice format, in which respondents are required to endorse one of three descriptions of prototypical attachment patterns on the basis of how well it fits with their own experience of close adult-adult relationships. Hazan & Shaver's original measure has subsequently been modified to include a fourth description, termed "fearful attachment" (Bartholemew & Horowitz, 1991). People who describe themselves as fearfully attached under the Bartholemew & Horowitz scheme tend to be drawn from Hazan & Shaver's avoidant group. This suggests that in three category schemes the dismissing group in fact constitutes two somewhat distinct groups, a finding which has been observed in the infant literature. The distinction between dismissing and fearful attachment is important conceptually and in practice: fearfully attached individuals are more likely to have experienced childhood abuse or neglect and are at greater risk of psychological problems in adulthood. In contrast, dismissing individuals tend to have experienced sub-optimal but non-abusive parenting.

The incorporation of a fourth category of attachment reflects developments in infant attachment research but also allows for a more conceptually coherent account based on two classes of model, Self and Other. Individuals may possess either positive or negative models relating to each of these, giving rise to four "attachment quadrants" (see Figure 1)

Figure 1: Schematic representation of attachment styles based on a two-dimension model of attachment (Bartholemew & Horowitz, 1991)



A shortcoming of measures which rely on composite descriptions of prototype attachment patterns is that a number of statements are included in each description, raising the possibility that respondents will find themselves endorsing particular descriptions whilst at the same time having reservations about the applicability of specific subsidiary statements. Therefore, a number of studies have taken prototypical descriptions and broken them down so as to form multi-item instruments (see Feeney & Noller, 1996). Factor analysis suggests two factors, termed by Feeney & Noller "comfort with closeness" and "anxiety over relationships". One characteristic of items associated with the "anxiety over relationships" factor is that of criticism by others, which in turn may relate to a negative model of Self.

Conceptually, then, there is considerable support for a four category model of attachment. However, if this were the case it should be relatively easy for individuals to recognize themselves in the prototype descriptions of attachment pattern which are used as measures. Early research using

such measures required individuals to select the one description which best suited their own style of relating. In practice, it emerged that individuals found this a difficult task, suggesting that Bowlby's theory that individuals reinforced their internal working models through their transactions with others was somewhat simplistic. For this reason later research has relied more on individuals rating the degree to which each of the descriptions accords with their style of relating. Empirically, only modest correlations have been observed between an individual's assessment of his or her attachment pattern and the assessments of friends or trained interviewers (Bartholemew & Horowitz, 1991). This also suggests that the relationship between internal working models and real-life relationships may not be as clear-cut as was originally imagined. Current attachment may be disrupted through the effects of negative life events, making it necessary to measure earlier attachment. However, it cannot be assumed that early attachment is highly correlated with adult attachment in either a normal population or a psychology out-patient population.

Stability of Attachment Patterns: The second assumption of early attachment researchers was that attachment pattern is relatively stable, although it is important to note that at no point has Bowlby suggested that attachment is entirely immutable. However, Bowlby does suggest that the behaviour which internal working models generates may in turn reinforce these internal working models: for example, a belief that "others are unreliable" leads the individual toward compulsive self-reliance and away from potentially helpful interactions with others which would lead to revision of the working model. Therefore there are theoretical grounds for believing both that attachment patterns are likely to be relatively stable across time, and that attachment pattern between infant and caregiver will generalize to other individuals.

Longitudinal studies (e.g. Grossman & Grossman, 1991) suggest that attachment patterns are relatively stable over a period of several years throughout childhood. There is also evidence that attachment pattern in infants reflects attachment patterns in mothers, suggesting a trans-generational effect (ibid.) On the other hand, the way in which a child masters socio-developmental milestones

may result in discontinuities. A securely attached pre-schooler is at an advantage in terms of managing the transition to school, but is nevertheless not entirely invulnerable to negative social environments encountered there; conversely, poor experiences in early and middle childhood may give rise to insecure attachment, but this can be rectified by more positive experiences with the adolescent peer group (see Champion, 1995 for a review).

In this thesis, early and current attachments are measured. Early attachment may be expected to predict current attachment, but, for reasons mentioned above, only weakly. Consequently, low correlations between measures of early and current attachment do not necessarily contradict the hypothesis that current perceptions of social support and experiences of dissociation are related to current attachment patterns. However, correlations between these measures lend some support to the hypothesis that attachment pattern mediates perceptions of social support and levels of dissociative experience.

Generalizability of attachment patterns To what extent does the earliest attachment pattern, generally that formed with the mother, determine subsequent patterns of attachment to others? There is good evidence that infants may be differentially attached to various caregivers in their environment (Grossman & Grossman, 1991) and to the same caregiver at different points in time. Even so, there is reason to believe that either early childhood attachment to mother, or early childhood attachment to the same-sex caregiver, tends to act as a template for subsequent relationships. Grossman and Grossman (1991) have conducted two longitudinal studies of attachment, following infants from the age of two months to ten years. Although their findings suggest that many of the variables which they measured tended to change over the years, certain key variables appeared to exhibit consistency over time: "early security seems to be reflected at 10 years in a general confidence in oneself, one's friends and in potential supporters" (ibid.). In addition,

they suggest that one reason for the lack of consistent secure base effects over time may be a result of insufficiently stressing experiences: "when asked about more recent and specific situations, all children reported what had happened, and the supportive quality of these episodes was unrelated to early attachment classification. They seemed rather to be anchored in the ups and downs of daily parent-child interactions..."(ibid.) Overall, they interpret their results as supporting the hypothesis that early attachment acts as an organizer of later emotional and behavioural characteristics. However, the relationship is not clear-cut, and further work is needed to clarify the relevance of early attachments to adult social relationships.

Attachment in adult clinical populations

What is the relevance of attachment to clinical problems in adulthood? Adults who have experienced severe neglect or abuse are at increased risk for a variety of psychiatric disorders (Harris & Bifulco, 1991; Parkes, 1991). However, there is little research which examines the relationship between dismissing and preoccupied attachment and subsequent psychiatric problems. Theory suggests that dismissing and preoccupied individuals will use opposite strategies for managing negative affect: dismissers will attempt to deal with life independently (compulsive self-reliance) whereas preoccupied individuals will have a lower threshold for seeking out social support.

1. **Abnormal grief reactions:** the combination of loss of attachment figure and trauma of bereavement makes grief one of the most painful conditions of experience: in usual circumstances, it is the attachment figure to whom an individual turns when faced with powerful negative emotions. There is evidence that problematic relationships characterized by ambivalence are more difficult to grieve than generally positive relationships (Parkes, 1991). Clinically, it has been observed that some bereaved individuals attempt to avoid all reminders of the bereavement, resulting in a constriction of affect. They tend to get rid of the deceased's personal possessions, avoid going into

the deceased's room, and, in extreme cases, move house soon after the death. The focus of clinical work lies in encouraging the individual to review the relationship rather than exclude memories of it from awareness. Other individuals are troubled not by a constriction of affect but by extreme anxiety. Here, the focus of clinical work lies in encouraging the bereaved person to take on tasks which were formerly the responsibility of the deceased, and to make use of available social supports. Although there have been few empirical studies linking attachment style to style of grief, attachment writers (Parkes, 1991) have used an attachment model to understand the ways in which grief manifests itself. Parkes has conducted a study of the way in which attachment relates to grieving, finding, in line with theory, that "low trust in self" was associated with excessive grief, whilst "low trust in others" was associated with excessive avoidance. Those with low trust in self and others experienced both excessive grief and excessive avoidance.

2. **Recovery from psychosis:** One study which has specifically examined the relationship between cognitive correlates of attachment style and outcome following psychopathology is that of Drayton, Birchwood & Trower (1998). They found that recovery from psychosis was related more strongly to an individual's post-psychosis attitude towards the event than it was to the severity of the psychosis. In particular, they provide support for McGlashan, Levy, & Carpenter's (1975) finding of two coping styles, "integration" and "sealing over", following psychosis, and show that these post-psychosis recovery styles are related to early attachment styles. An insecure attachment style predicted a tendency toward "sealing over" the psychotic episode, i.e. minimizing its significance and refusing to consider the way in which it related to the individual's life history. Securely attached individuals, by contrast, tended to seek to "integrate" the psychotic episode into their life histories and to gain a greater understanding of the events which had led up to it. Integration was associated with lower levels of depression following the psychosis, even when the severity of symptoms was controlled for. This suggests that the mental models of attachment play an important part in the cognitive processes which an individual makes use of when faced with emotionally

powerful events. Specifically, this study suggests that securely attached individuals, despite their serious psychiatric conditions, are able to process distressing events more completely than are insecures, and thus integrate these events into a coherent life story. Insecurely attached participants avoided attempts at integration, presumably resulting in a less coherent life story. (The ability to tell a coherent life story is often taken as a measure of secure attachment in adolescents and adults: cf. Main (1991).)

3. **Dissociative disorders** have been linked to disorganized/disorientated attachment by Liotti (1992), who found that individuals with dissociative difficulties in adulthood were, as children, likely to have experienced care from a mother who was herself attempting to resolve a loss of a significant other. Forty six patients suffering from various dissociative disorders were compared with a group of 119 patients with other psychiatric diagnoses in terms of whether their mothers had suffered a loss through death of a parent, sibling, child or husband in the two years before to two years after the patient's birth. Approximately two-thirds of the dissociative group, as against just thirteen per cent of the non-dissociating group, reported that their mothers had suffered such a loss. Liotti suggests that the mother's preoccupation with her own emotional difficulties had made her unavailable for her child, and that the child experienced this unavailability as frightening. Alternatively, the mother may have unconsciously turned to her child for emotional support. The child, picking up on the caregiver's fragility, is again likely to have been frightened by the perceived precariousness of its own position. In either case, disorganized attachment may result.

4. **Agoraphobia** Attachment theory has been used to explain agoraphobia (Guidano & Liotti, 1983). One feature of agoraphobia which fits well with attachment theory is the fact that many agoraphobics are fearful no of crowded places *per se,* but of being in a crowded place without a close companion. Liotti points to early childhood experiences of parenting and, using case material, suggests that parental threats to abandon the child are frequently found in the histories of

agoraphobics (see also Bowlby, 1973, pp. 334-56). Controlled studies examining parenting styles have yielded contradictory results (Arindell, Emmelkamp, Monsma, & Brilman, 1983); Liotti suggests that this may be because specific questions regarding threats of abandonment often do not feature in the scales used in such research.

5. Post Traumatic Reactions Whilst there is a large literature attesting to the importance of early childhood experience in adapting to trauma (McFarlane & Girolamo, 1996), few studies have examined current attachment, and even fewer have made distinctions more fine-grained than secure *vs.* insecure attachment. One study which has is that of Mikulincer, Florian & Weller (1993), who examined the association between adult attachment style and coping strategies of civilians during the Gulf War. Participants were divided into two groups, those who had been in areas in which Scud missiles had landed, and those who had been in areas not so affected. This enabled the researchers to determine the relative importance of stressor events as against predisposing personality factors. Attachment, as measured by Hazan & Shaver's (1987) three category measure of adult attachment, was found to be related to scores on the symptom Checklist (90 item version) (SCL-90; Derogatis, 1979) and the Impact of Events Scale (IES: Horowitz, Wilner & Alvarez, 1979), with securely attached participants experiencing lower levels of distress than either avoidants or preoccupieds. Coping strategies, as measured by the Ways of Coping Checklist (Solomon, Mikulincer & Avitzur, 1988), were also related to attachment pattern, with preoccupied individuals using more emotion-focussed strategies than did secure or avoidant participants. Avoidants used strategies based on psychological distancing from the event. In line with the authors' hypotheses, symptomatology was more pronounced in areas of highest danger. This study adds to a large literature which suggests that combat-related stress is particularly pronounced in those who have experienced adverse childhoods (see McFarlane & Girolamo, 1996 for a review). However, in using a measure of current attachment very shortly after the Gulf War and with a civilian population exposed to varying degrees of danger, this study goes beyond many of the combat veteran studies.

These have often relied on retrospective accounts of childhood rather than measures of current attachment, and have not looked at the effects of avoidant, preoccupied and fearful attachment separately.

The above review of attachment suggests that cognitive traits as well as social styles may be partly generated by attachment pattern. There are a two broad strategies for managing negative affect cognitively; repression and dissociation. Repression refers to constricted affect ("numbing") whilst dissociation refers to affective-cognitive modules which are split off from ordinary consciousness, breaking through from time to time in the form of flashbacks and nightmares. Theoretically, it is expected that securely attached people will use attachment figures appropriately, i.e. that they will discuss emotionally significant events with attachment figures. Their advantage in terms of psychological and social resources means that they will tend to experience less dissociation and repression than insecurely attached groups. Avoidantly attached individuals, who find it difficult to trust others, will fall back on individual "damage limitation" strategies based on repression of emotion. This enables them to manage emotion independently. Repression of emotion enables the avoidantly attached individual to retain a sense of self, in contrast with dissociation, which results in an impaired sense of integration of self. Preoccupied individuals may be hyper-sensitive to threat-related cues because their strategy for managing affect depends upon recognizing early signs of danger so that they can quickly seek out attachment figures. Finally, one would expect that fearfully attached individuals will exhibit more marked levels of dissociation in the absence of any coherent social or psychological strategy for managing affect.

Dissociation

Definitions Dissociation is defined as "a disruption in the usually integrated functions of consciousness, memory, identity, or perception of the environment" (American Psychiatric Association, 1994). This definition has been criticized on the basis that it lacks theoretical precision.

Cardena (1994) identifies three ways in which dissociation has been defined in the clinical literature. Firstly, dissociation describes "semi-independent mental modules or systems that are not consciously accessible, and/or not integrated within the person's memory, identity or volition. Second, dissociation is viewed as representing an alteration in consciousness wherein the individual and some aspects of his or her self or environment become disconnected or disengaged from one other. And third, dissociation is described as a defense mechanism that effects such disparate phenomena as non-organic amnesia, the warding off of current physical or emotional pain, and other alterations of consciousness" (Cardena, 1994).

These varied definitions of dissociation suggest that the concept of dissociation is currently best understood as an umbrella term, with particular behaviours or cognitive states being subsumed by it. Cardena argues that definitions which include over-learned, automatic behaviour such as the sequences of behaviours involved in driving a car are unworkable because they are over-inclusive: conventional parallel processing models suggest that the cognitive system is *ordinarily* made up of semi-independent mental modules, not all of which are consciously accessible. According to definitions which include over-learned behaviour or behaviour which usually takes place outside of awareness, all of us throughout our lives are subject to dissociation, such that the concept ceases to have any meaning as a clinical phenomenon.

The second definition is preferable in that it conveys the idea of an *alteration in consciousness* characterized by disconnection between aspects of the self or environment: this describes more

accurately the phenomena which the clinician encounters, whilst excluding over-learned sequences of behaviour such as automatic behaviour during driving, which can be adequately understood in terms of other models. What is distinctive about dissociation is not that an individual is not fully conscious of what he or she is engaged in, but that the individual *cannot turn attention to, and thus cannot in principle be aware of* the activity which is being performed.

Cardena's third definition, based on the notion of defense, is not irreconcilable with the second, altered-consciousness, definition. Some, but not necessarily all, dissociative states may be brought about in order to defend against unbearable trauma. Alternatively, dissociative states may not occur "in order to" defend against negative affect in the Freudian sense of a dynamic, purposeful process. Rather, dissociation in the face of trauma may, as Janet suggested (van der Kolk & van der Hart, 1989), be an expression of the inherent limits of the human information processing system, with the exclusion of negative affect being merely an epiphenomenon.

In this thesis, Cardena's second definition of dissociation – that of an alteration in consciousness – is preferred to the first, which is considered over-inclusive.

The "defense mechanism versus inherent limitations" debate becomes more complicated when we consider that dissociation may be consciously employed initially, but may become automatic with continuing practice, and yet more complicated when we consider that a degree of dissociation may represent the normal state of affairs in infant and child psychology, with the developmental task of the early years being to "draw together" a range of ego states and integrate them into a model of a coherent self. There are obvious difficulties in studying the phenomenological world of infants and young children. Some writers argue for a fairly developed (and yet rudimentary) sense of self, as evidenced by, for example, complex turn-taking in interactions with caregivers (Trevarthen, 1989). For such writers, one of the tasks of infancy is to define and refine this rudimentary sense of self. Others (Schore, 1994) point to the discrete physiological states found in infants as evidence of shifts

between unintegrated ego states. If we accept that infancy and early childhood is characterized by at least a degree of dissociation between unintegrated ego states, then we can think of "trait" dissociation in childhood and adulthood not as a failure of some hypothetical normative state of integration, but as a failure to develop the capacity to integrate various ego-states.

Theories of dissociation Janet was among the first to study dissociation, and much of the current thinking about dissociation owes a debt to his work. In a review of his theory of dissociation, van der Kolk and van der Hart (1989) describe Janet's belief that disturbances of memory processing were at the heart of dissociative phenomena. Van der Kolk and van der Hart's (1989) review of Janet's theory is summarized below.

In normal circumstances, stimuli are processed and accommodated by existing schemata. One of the functions of memory is to link the present with the past, so for Janet, memory involved not only the processing and storing of data, but also the "organizing and categorizing [of] incoming data in the light of previously integrated memories" (van der Kolk & van der Hart, 1989).

The hallmark of successful processing and categorizing of events was that they were represented linguistically: "it is not enough to be aware of a memory that occurs automatically in response to particular current events: it is also necessary that the personal perception "knows" this image and attaches it to other memories" (Janet, 1898). For Janet, some events could not be processed to this degree, either because the events were characterized by accompanying "vehement emotions" which prevented both adaptive responses to the event and subsequent higher order processing of the event itself, or because the individual's schemas could not accommodate the nature of the event. Partial processing of the event resulted in non-linguistic memories, split off from conscious awareness. Janet noted that his patients attempted to deal with these memories, but that in doing so they re-subjected themselves to the "vehement emotions" which had originally accompanied the trauma, resulting in a "phobia of memory" (Janet, 1925). The attempts to avoid the affect-laden memories of the trauma precluded further processing and consolidated the traumatic memories in their split-off

state. These partially processed memories continued to intrude in the form of somatic states, intrusive imagery and anxiety reactions.

Implicit in Janet's model is the idea of levels of representation of events. Events might be encoded at a somatic level, in which case they will be re-experienced in the form of physiological states; the next stage up, Janet proposed, was the iconic level, where perceptual intrusions attested to the partial processing of the trauma. Finally, linguistic representation allowed the memory of the trauma to become related to pre-existing cognitive schemas. Once processed at this level, the event was largely robbed of its overwhelming affective quality.

In many respects, much of Janet's original work continues to hold true today. Hilgard's neodissociation theory (Hilgard, 1973), drawing on experimental work with hypnotic states, suggests a model of the mind in which an "executive ego" co-ordinates and monitors the operation of a number of semi-automonous lower-level cognitive structures. Normally, conscious awareness is a feature of the executive ego. However, in hypnotic states awareness of stimuli can apparently be terminated. Hilgard demonstrated this by asking hypnotized subjects to rate their discomfort when they placed their forearms in a container of ice-cold water. Given the suggestion that they would feel no pain, subjects indeed reported feeling very little discomfort, much less than was reported when they were not in the hypnotic state. However, when it was suggested to them that a part of their mind remained aware of sensation in the forearm, and that this part of the mind would be able to "express itself" not through any complex verbal process but by means of a simple motor process such as finger tapping, a minority of the highly hypnotizable subjects reported a level of discomfort more in line with that found in the ordinary waking state (Hilgard, 1973). Hilgard explains this by the analogy of a "hidden observer", or, put more technically, a semi-autonomous cognitive structure, temporarily released from the constraints of the executive ego. Critics have argued that these effects are explicable in terms of demand features of the experiments, but Hilgard

and his colleagues have refined the experimental procedure to control for the effects of demand characteristics, and continue to report hidden observer effects (for a review of subsequent experiments, see Hilgard, 1994). The existence of such effects under hypnosis suggests that in normal waking states, a constellation of semi-autonomous cognitive structures is monitored and controlled by a central executive system. This central executive system maintains the subjective impression of a highly integrated whole, and indeed promotes integration between the components of the whole under normal circumstances. Such a view is reconcilable at a theoretical level with a number of cognitive theories: Meichenbaum & Gilmore (1984) have reviewed the development of such theories. Neodissociation theory therefore offers a conceptual framework for understanding dissociative events not only in hypnosis but also in the dissociative disorders which the clinician encounters and in the "normal dissociations" of everyday life.

If dissociation under hypnosis reflects an underlying structure of the mind which is normally not evident because of the integrative function of the executive, it should be the case that hypnotizability is related to dissociative experiences in normal waking states. Such a link has in fact been demonstrated by Spiegel, Hunt & Dondershine (1988), who showed that PTSD patients had significantly higher hypnotizability scores than patients with a range of diagnoses in which dissociation was not a central feature.

Unlike Janet, Hilgard has little to say specifically about the relationship between dissociation, trauma and the various levels of memory – somatic, iconic, and linguistic. But the experimental findings of Hilgard, combined with Janet's theoretical work on the nature of traumatic memories and dissociation, provide a coherent account of the way in which traumatic experiences result in dissociation.

One feature of the "hidden observer" literature is the relatively low prevalence of hidden observers: they are to be found only in the most hypnotizable of subjects, and even in this group they represent a minority. On the basis of his research, Hilgard estimates that hidden observer effects are to be found in just five percent of the population. One explanation for this is that the integrative function of the executive system is highly resistant to suspension, even under hypnosis, in most subjects, but that in a small subset of subjects there is a greater propensity to dissociation. A developmental perspective may offer a model for understanding the varied degrees of integration of cognitive subsystems found in the general population.

The Relationship between Dissociation and Trauma: a Developmental Perspective

While dissociation is a common experience in the immediate aftermath of a traumatic event (Cardena & Spiegel, 1993; Spiegel & Cardena, 1991; McFarlane & Girolamo, 1996), some individuals appear to rely on dissociation as a mechanism for coping with negative affect in the longer term (Terr, 1991; Sanders & Giolas, 1991; Herman, Perry & van der Kolk, 1989; Chu & Dill, 1990). Less extreme forms of dissociation such as day-dreaming may also occur routinely in non-clinical populations. A number of models have been proposed to explain the occurrence of dissociation and its apparent relationship to trauma.

Dissociation can be considered as a cognitive style developed throughout childhood in response to adverse childhood circumstances. Whilst children who benefit from stable and secure environments will tend to develop their integrative skills, thereby building a strong sense of self, children faced with poor environments may bring under conscious control their tendency to dissociate, and may go on to use this more primitive cognitive strategy for managing negative affect. Terr (1991) quotes accounts of children who have suffered abuse and have reacted to their experiences by bringing under voluntary control a dissociative process:

"Frederick was 7 years old when he was sent to live with his aunt because his mother found out, through a tape recording set up to catch her husband at infidelity, that Frederick's stepfather had been throwing him against walls while she worked the evening shift. Frederick did not tell anyone his year-long story, despite two visits to the emergency room and one neighbor-instigated protective service investigation.
While in his aunt's custody, Frederick glanced down at the playground pavement one day and saw blood. After several seconds of searching for a wounded companion, Frederick realized that it was he who was bleeding. The boy realized he could feel no pain.
In a psychotherapy session I asked Frederick how he could make this sort of thing happen. "It jus' happens now," he said. "I used to pretend I was at a picnic with my head on Mommy's lap. The first time my stepdaddy hit me, it hurt a lot. But then I found out that I could make myself go on Mommy's lap, and Winston couldn't hurt me that way, I kept goin' on Mommy's lap – I didn't have to cry or scream or anything. I could be someplace else and not get hurt. I don't know how many times Winston punched me out, I wasn't always payin' attention. Like I told you, first I'd be at a picnic on Mom's lap. Later I didn't have to think of no picnic – jus' her lap. Now if somethin' makes me bleed, I don't think of no lap at all. I jus' don't feel no pain " (Terr, 1991).

Rather than "paying attention" to the experience of physical abuse, Frederick had learned to "pay attention" to an internal image, an image which fostered feelings of security and safety. With increasing practice the process of switching attention from the environment to internally generated images became automatic: *"Now if something makes me bleed... I jus' don't' feel no pain".*

Terr also reports a similar case which clearly illustrates the way that dissociation can originate as a voluntarily invoked mechanism for minimizing negative affect, but can then develop into an involuntary mechanism:

Suzanna was 6 years old when her teenaged brother began sexually molesting her.... "He put his penis where I pooped. It hurt. I told him it hurt, but he said nuttin' back. I didn't like that at all. It didn't really frighten me. Not really. I just made up my mind to think about other things." When Suzanna was asked how she was able to do this mind trick, "to think about other things", she replied, "I say 'I don't know' over and over to myself. When I say my prayers I keep saying the last word of the prayer. Sometimes I do it a hundred times. I say 'I don't know' a lot of times in my mind each day... Sometimes now ***I find myself not feeling things****".* (Terr, 1991; emphasis added).

The same pattern is described, in which what began as a deliberate, voluntary action, develops through practice into an automatic process. Instead of "choosing" not to feel things, Suzanna now "finds herself" not feeling things. The adaptive value of such "mind tricks" is that they minimize negative affect. More sophisticated and/or adaptive cognitive processes are not as yet available to the child, and the child may also be unwilling or unable to draw on social support. (Terr reports that

Frederick had kept his secret for over a year, until it was discovered by chance. Suzanna had tried to tell her disbelieving mother, and had then remained quiet for two and a half years.)

A potential difficulty with use of dissociation as a general strategy is that traumatic events then become encapsulated and excluded from conscious awareness. Attention is diverted from representations of the traumatic event, resulting in the usual cognitive processing being prevented from taking place. This gives rise to the existence of an encapsulated, unprocessed, "raw" representation of the traumatic event. Whilst the individual's cognitive system may be able to ward off the representation from conscious awareness most of the time, the individual remains vulnerable to occasional re-experiencing of the trauma in the form of affect-laden intrusive images.

Children enjoy less knowledge of the world than adults, and possess less sophisticated cognitive resources for managing situations and psychological states. Instead they "borrow" knowledge and experience from their caregivers. If the caregiver happens to be abusive, the child is caught in an approach-avoidance trap. On the other hand, the lack of support from a caregiver seems sufficient to promote dissociation. Suzanna was disbelieved, rather than abused, by her mother, but this appears to have been sufficient to result in her falling back on primitive cognitive coping strategies. This highlights the importance of caregiver support and suggests how in adulthood adequate social support may protect against poor outcome following trauma.

Just as attachment theory predicts an individual's tendency to seek or avoid social support in times of distress, so it predicts particular cognitive strategies which individuals might use in the face of negative affect. Secure individuals are likely to be relatively more confident in exploring their emotional reactions due to their confidence in themselves and in the ability of their attachment figures to help them with the process of adaptation. Avoidant individuals, however, are likely to use "defensive exclusion" in the form of constricted affect. In doing so, they maintain a positive view

of their ability to manage distress and bypass the need to seek out support from attachment figures. Anxiously attached individuals are, by contrast, more likely to become sensitized to external signals of danger. In terms of dissociation, this will be reflected in a tendency to absorption in events. Finally, fearfully attached individuals are likely to experience the more severe forms of dissociation. In contrast to anxiously attached individuals, there is little value in their becoming preoccupied with external signals of threat because experience shows them that neither they nor their attachment figures are able to manage their negative affect. Consequently such individuals may use primitive or extreme forms of dissociation such as depersonalization and derealization.

In this context, it is worth noting that individuals with childhood histories of abuse or neglect are particularly likely both to employ dissociation as a defense against negative affect and to have a relatively poorer psychological adjustment to trauma (van der Kolk, 1996).

Traumatic events: Attempts to define traumatic events have been dogged by the fact that trauma results from an interaction between the event and the individual who experiences it. What is traumatic for one individual may be neutral or even positive for another. DSM IV (American Psychiatric Association, 1994) defines a traumatic event as one in which there was "actual or threatened death or serious injury, or a threat to the physical integrity of self or others". However, evidence has already been presented which suggests that PTSD may be related more to pre-existing social and cognitive variables than to objective aspects of the stressor.

Definitions of traumatic events are becoming broader: the survivors of the Piper Alpha oil platform disaster were not entitled to compensation because their own safety was not threatened once they were in the platform's lifeboats. A few years later, relations of the Hillsborough victims *were* able to claim compensation for trauma incurred as a result of watching the events unfold on their television screens. Car accidents may result in PTSD symptoms even when it is immediately

apparent that the victim has sustained no injury. Bereavements are an expected part of human life and yet the grief reaction shares many features with PTSD. Thus, attempts to define traumatic events in terms of objective danger or in terms of the unusual nature of the event have been problematic.

Perhaps it is more useful to think in terms of individual vulnerability to trauma, much as we think of individual vulnerability to depression. In the case of depression, we tend not to search for "depressor events"; although the role of life events is acknowledged, there is no attempt to define which events reliably lead to depression and which do not. If this is the case, it makes more sense to focus on the meaning which an individual attaches to a trauma, whatever the nature of the event which triggered it. It follows from this that both bereavement and other stressors which do not meet the objective criteria for PTSD stressors should nevertheless be considered as traumatic events if they result in a trauma reaction in a given individual.

One distinction which does seem useful is the distinction between Type I and Type II trauma. Type I trauma consists of a single traumatic event, whilst Type II trauma consists of a series of events occurring over time. Type II trauma in childhood is often synonymous with abusive or neglectful parenting and, as has been shown, may result in a dissociative cognitive style in the face of upsetting events or reminders of past traumas. Therefore, an individual who has suffered a series of traumatic events in childhood may fare particularly badly in the face of a single trauma in adulthood, as his or her reaction may have as much to do with the childhood experience of repeated trauma as it does with the particular current event which, superficially, seems to be the trigger .

The literature on prolonged trauma in childhood strongly indicates that such experiences are associated with adult psychopathology (Terr, 1991). What is somewhat less clear is the degree to which early upbringing relates to outcome in the face of Type I trauma experienced in adult life.

For this reason, the present study attempted to identify individuals who had experienced a Type I trauma in adulthood but no repeated trauma in childhood. In these individuals we are able to see the effects of attachment pattern on adjustment to trauma *per se,* whereas in the case of individuals who have experienced a traumatic event in adulthood in addition to a series of traumas in childhood there is a danger of confounding the effects of early trauma with early attachment pattern.

It is recognized that poor adjustment reactions following traumatic events can be related both to the nature of the trauma and to aspects of an individual's pre-trauma history (Finkelhor & Browne, 1984). Thus, the meaning of an event and the ability of the individual to process that meaning are of relevance. If this is the case, it is likely that traumas which give rise to shame may cause particular difficulty because the experience of shame will make it relatively more difficult for an individual to approach others for support. Joseph, Dalgleish, Williams, Yule, Thrasher & Hodgkinson (1997) have demonstrated that attitudes to emotional expression are related to outcome following traumatic events. Their research demonstrates that a negative attitude towards emotional expression, as measured by their own four-item scale, predicted post-traumatic outcome up to two years later as measured by the Beck Depression Inventory and the avoidance factor of the Impact of Events Scale. Such negative attitudes may emerge from attachment-derived internal working models, either of self (*"showing my emotions is a sign of weakness"*) or others (*"other people are unreliable"*). Furthermore, particular negative emotions related to traumatic events, emotions such as survivor guilt or shame, may make it particularly difficult to approach others for support.

Measuring Dissociation: The Dissociative Experiences Scale Dissociative experiences can take a number of forms, and therefore one requirement of a measure of dissociation is that it taps the kinds of dissociative experience which can occur. A number of measures of dissociation exist, but that with the greatest amount of psychometric validation is the Dissociative Experiences Scale (Bernstein & Putnam, 1986) (see Appendix 5). There is good evidence to suggest that the

Dissociative Experiences Scale is multi-factorial. Factor analysis of the DES by its authors (Carlson, Putnam, Ross, Anderson, Clark, Torem, Coons, Bowman, Chu, Dill, Loewenstein & Braun; 1991) has suggested three factors, namely amnestic dissociation, absorption-and-imaginative involvement, and depersonalization-and-derealization. Between them, these factors accounted for 49% of the variance.

A second factor analysis of combined responses to the DES and an unpublished 13-item normative dissociation scale has been conducted by Dalenberg, Coe, Reto, Aransky, Duvenage & Weber, (1994). They argue that the items on the DES fail to capture more everyday dissociative experiences, and that therefore it is important to include more normative items in any factor analysis of dissociative experiences. Using this method, their factor analysis was reported to give rise to four factors accounting for 40% of the variance. These factors are of particular interest in this paper because of their reported relationship to attachment styles (Coe, Dalenberg, Arensky and Reto, 1995). For this reason, an attempt was made to use this four-factor model in the present study.
The four factors of the DES, as described in Dalenberg et al.'s study are summarized below.

Absorption is seen as "the tendency to lose oneself in the emotional demands of the present".
Isolation is defined by the same authors as the "tendency to divorce oneself from the present and become immersed in related or unrelated internal events".
Depersonalization/derealization is defined with reference to "symptoms such as not recognizing self, friends or family members, feeling one's body doesn't belong to the self, feeling that other people and the world are not real, or are only seen through a fog, or having no memory of major life events".
Finally, *memory disturbance* "reflected experiences with people, places or things that should be familiar but seem unfamiliar, conflicts between one's memory and that of a companion, difficulty determining the source of a memory, etc.".

A distinction can be drawn between memory disturbance, which can by its nature be determined only retrospectively, and other dissociative experiences, which may occur at the time of the trauma. The other forms of dissociation can be further subdivided into those in which the sense of reality is lost, with respect either to the individual or to the environment (depersonalization and derealization), and those in which the sense of reality is preserved, but the boundaries between the person and environment are disrupted. In the case of isolation, the boundary between self and environment seems to become more pronounced, whereas in the case of absorption, it is perceived as becoming more permeable.

Dalenberg *et al* have not published detailed results of their four-factor study. In attempting to define the two factors of *absorption* and *isolation* for the purposes of the present study, it was therefore necessary to undertake an analysis of the DES data derived from the participants in this study. Two approaches were taken.

Content analysis: Firstly, the relevant items of the DES were examined by the author and allocated to one or other of the factors on the basis of their content. For example, Item 17 (*"Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them."*) was taken to reflect a preoccupation with the external environment and was therefore allocated to the "absorption" factor. Item 18 (*Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them"*) reflects a tendency to become immersed in the internal world, and was therefore allocated to the "isolation" factor. Items 2, 14, 15 and 18 were allocated to the internal ("isolation") factor on this basis, whilst items 16, 17, 20, 22 and 23 were allocated to the external ("absorption") factor.

The second approach involved a statistical factor analysis of the items, undertaken by the author (see Appendix 10). Principal components analysis with equamax rotation gave rise to two factors with items loading at between .59 and .91 on their respective factors. All items loaded at less than .50 on the remaining factor. This approach resulted in items 14 and 17 contributing towards one of the factors, with the remaining items contributing to the other. However, content analysis of the items revealed that this solution did not give rise to an "internal/external" distinction. Rather, the two items which formed one of the factors seemed to reflect an individual's imaginative involvement in events, whether internal or external (Item 14: *Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event.* Item 17: *Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them.*) Because this factor analysis gave rise to two factors which were not expected to be related to attachment, and because it does not correspond with the more reliable factor analysis of Dalenberg *et al.*, it was not subsequently used. Instead, in this thesis the factors termed "isolation" and "absorption" are derived from the content analysis of the items which form Bernstein & Putnam's (1986) "absorption and imaginative involvement" factor.

Empirical evidence for a relationship between dissociation and attachment Coe, Dalenberg, Aransky & Reto (1995) suggest that three of the DES factors (absorption, isolation and depersonalization / derealization) are related to attachment pattern. In their study they administered the Dissociative Experiences Scale along with a number of questions addressing more normative dissociative experiences, to 410 undergraduate and post-graduate students. Attachment was measured using Bartholemew & Horowitz' (1991) prototype descriptions. Fearful attachment was found to be related to depersonalization / derealization, whilst dismissing attachment was positively correlated with isolation and negatively correlated with absorption. The authors hypothesized that preoccupied individuals would exhibit greater levels of absorption, but this was not supported by

their results. Memory disturbance was not related to any particular attachment pattern. Degree of exposure to childhood violence was also measured in Coe *et al's* study, and was found to be positively correlated with fearful and preoccupied styles and negatively correlated with secure attachment. On the basis of this, Coe *et al.* (1995) argue that pattern of attachment gives rise to particular cognitive strategies for managing stressful and traumatic events, and that the style of dissociation which an individual employs reflects the nature of these strategies.

Isolation reflects the cognitive style of the avoidantly attached individual, who relies on his or her positive model of self and retreats into his/herself, both as a cognitive style and as a response to trauma. *Depersonalization / derealization* reflects a lack of any coherent strategy for managing negative affect arising from trauma. This style reflects the fearfully attached individual's predicament of being unable to have confidence either in Self or in Others. Instead, a range of responses to emotionally challenging situations are observed in fearfully attached individuals, and these behaviours seem to lack any adaptive value. Self-harm, for example, is a common response to distress in some individuals, but is clearly maladaptive as a long-term strategy for managing negative affect.

Whilst Coe *et al.* argue for personality factors, and in particular, attachment, as predictors of specific dissociative experiences, an alternative view is posited by Beere (1995), who suggests that it is the nature of the traumatic event which predicts the particular dissociative symptoms which an individual experiences. For example, the experience of time seeming to pass slowly is, Beere suggests, associated with traumas which by their nature can be anticipated: for example, rounding a bend in the road and seeing an obstacle which the driver knows he will not have time to avoid. In the same vein, traumas which affect self-identity, Beere argues, are more likely to result in depersonalization than in other forms of dissociation. Pain is also related to depersonalization in Beere's scheme. Using the DES to measure various forms of dissociation in a student population, Beere reports that his hypotheses are largely supported.

The work of Beere and that of Coe *et al.* suggests that particular dissociative experiences may be a function both of the nature of the trauma and of current attachment.

One alternative explanation for the finding concerning the role of trauma-related variables as predictors of dissociative symptomatology lies in the measures which were employed in each of the studies. Coe *et al.*'s group used both the Dissociative Experiences Scale and an unpublished Normative Dissociation Scale (Dalenberg, Coe, Reto, Aransky, Duvenage & Weber; 1994), whilst Beere employed only the DES. A shortcoming of both these studies from a clinical perspective is the nature of the sample, namely college students. College students tend to be younger, more highly educated and drawn from predominantly middle class backgrounds. Dissociation tends to be more prevalent amongst younger age groups but negatively correlated with education (Shalev, 1996), making it difficult to generalize results from college student samples to the general population.

Social Support

In a review of the literature, Brugha (1995) notes that social support has long been assumed to be of importance in recovery from psychiatric disorder, but that few empirical studies have been conducted in the area: "there have been few experimental studies and hardly any randomised controlled clinical trials to evaluate the effects on illness or survival of enhancing personal social support networks, or of enhancing the ability of such individuals to recruit support more effectively" (Brugha, 1995, p.1). Therefore, the large literature attesting to the protective nature of social support in relation to a number of psychiatric conditions, particularly depression, must be viewed with a degree of caution. The *perception* of social support may correlate only modestly with support received, although perception of support availability may be more predictive than actual support received (Sarason, Pierce, Shearin, Sarason & Waltz, 1991; Parker, Barrett & Hickie, 1992; Henderson, 1981).

With these caveats in mind, there is nevertheless growing evidence that social support is related to psychological health. Brown & Harris (1978) have shown that the absence of social support is highly related to depression. Their sample of women living on a Camberwell housing estate demonstrated that clinical depression was strongly related to lack of a confiding relationship and presence of more than one school-age child. Work was a protective factor, perhaps because it provided social support or because it provided the woman with an alternative role to that of mother. Of all these factors, however, it seems that absence of a confiding relationship is most predictive of clinical depression.

The "wrong kind" of social support – support which is perceived as intrusive - has been shown to impact adversely on sufferers of schizophrenia (Vaughn & Leff, 1976). These kinds of interactions, characterized by what Vaughn & Leff term "high expressed emotion", were found to be strongly associated with a re-admission within six months of discharge from a period of in-patient care amongst schizophrenic patients.

In the area of adjustment following trauma, social support seems no less important. Perry, Difede, Musngi, Frances, & Jacobsberg (1992) found that the level of perceived social support was predictive of relatively better psychological outcome in a group of burns patients, and that subjective predictors such as perceived social support were in fact more predictive of PTSD at six and twelve months than were more objective factors such as the severity of the burn.

In a large scale survey of 1,213 sexual assault victims Gidycz & Koss (1991) found a negative correlation between psychological adaptation and a belief that others are untrustworthy: psychological adaptation was assessed with a combined score derived from the Beck Depression Inventory (Beck, Ward, Mendelson, Mock & Erbaugh, 1961) and the State-Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970), whilst cognitive beliefs were assessed by an unpublished

measure developed by the authors. However, the authors caution that low trust in others may be an outcome of sexual assault rather than a pre-existing personality trait.

Finally, Basoglu, Paker, Paker, Ozmen, Marks, Incesu, Sahin, & Sarimurat (1994) demonstrated a negative correlation between social support and severity of PTSD symptoms in a group of torture survivors. In this study, as in the preceding study, it was not clear whether perceived lack of support was a result of, rather than a contributory factor to, poor outcome.

The above studies refer to current social support in adult survivors of trauma. Longitudinal models of adaptation to trauma have stressed the importance of childhood attachment relationships. Magai, Distel & Liker (1995) suggest that biases in emotion decoding based on early experience may underlie later social and cognitive strategies. They have shown that attachment pattern predicts emotion decoding biases in recognition of facial expressions, with anxiously attached women recognizing anger expressions more accurately than did secures or avoidants (although the opposite was found in anxiously attached men). Attachment theory states that anxiously attached individuals will be hypervigilant to emotional states of others, particularly if those states might indicate imminent abandonment. Avoidants were less able to recognize joy and disgust, reflecting their distancing of emotional cues. It is possible that such biases serve to skew social interactions, thereby affecting the perceived quality of social support.

In childhood the quality of the child-caregiver relationship is perhaps the most crucial determinant of outcome after trauma (McFarlane, 1988), but secure childhood attachment seems to offer protection even into adulthood (Finkelhor & Browne, 1984). One explanation for the protective nature of secure attachment is that it (a) gives rise to a sense of a strong, competent self which, even if temporarily overwhelmed by a trauma, is able to rebuild a sense of meaning, and (b) allows the

individual to seek out social support. Conversely, the effects of trauma in adult life are magnified in adults who have experienced childhood abuse or neglect (van der Kolk, 1996).

Social support can take a number of forms (for example, practical help, emotional succour). In this paper, the provision of emotional support is of interest because of its relevance to attachment pattern. By way of example, it is intuitively unlikely that, having been involved in a car accident, a securely attached individual would not wish to discuss it with an attachment figure, even though there is no *practical* gain in doing so. Part of such a discussion is likely to focus on the individual's emotional reactions to the incident. Whilst by-standers can provide practical assistance, this will probably be insufficient for most individuals.

Here, emotional support is operationally defined as the existence of an interpersonal environment which allows for discussion of events which are emotionally significant. Ideally, the person seeking support should feel confidence in the ability of the supporter to reduce the intensity of negative affective states by means of interactions which are aimed at eliciting negative affect and reconstructing a coherent life story. A forum in which one can both express negative affect and construct a coherent life story is a common element of many schools of formal therapy. Even the act of writing about distressing events in a way which emphasizes the expression of negative emotional states and the drawing together of disparate elements into a coherent whole results in measurable health gains (Pennebaker, 1993). Most people prefer talking things over to writing things down, perhaps because the presence of another allows for a process of 'triangulation' whereby the listener is able to help the speaker view an event from novel perspectives.

Clinically, the importance of narrative has been asserted by, amongst others, Wigren (1994), who uses case material to illustrate the way in which an incomplete narrative may reflect problems in processing trauma-related material. She links the inability to tell a complete narrative with Janet's

hypothesis, discussed earlier, that traumatic memories cannot readily be processed by existing schemata and therefore continue to exist in sensory or perceptual forms.

There are two components to the "talking over" process: an individual has to feel confidence in the person to whom he/she chooses to confide, and the confidant has to be able to elicit (or, at least, listen to) negative affect whilst helping the individual to reconstruct a life story. Attachment is of relevance because of the varying models of others which attachment theory suggests. The theory states that securely attached adults will feel comfortable with intimacy and will therefore be able to express distress to their attachment figures. Anxiously attached individuals will tend excessively to seek out support from attachment figures. By contrast, avoidantly attached individuals avoid discussion of negative emotions with their attachment figures, as do fearfully attached individuals. This reflects the negative expectations avoidant and fearfully attached individuals have of others. Research into the relationship between attachment pattern and self-disclosure broadly supports the above hypothesis. Mikulincer & Nachshon (1991) used Hazan & Shaver's tripartite measure of attachment (Hazan & Shaver, 1987) to classify undergraduate students as either secure, ambivalent or avoidant. Each pattern was found to be related to self-disclosure, as measured by the Self-Disclosure Index (Miller, Berg & Archer, 1983). Specifically, secure and ambivalent people were found to disclose more than avoidant individuals, in line with attachment theory.

Attachment pattern may also have implications for the cognitive strategies which an individual uses in the face of distressing events, in that individuals who find it difficult to use others for support may instead attempt to minimize their awareness of negative emotions. Bowlby draws both on Hilgard's neodissociation theory, discussed earlier, and on Erdelyi's theory of 'defensive exclusion' (Erdelyi, 1974) to explain this process of minimization (Bowlby, 1980). "During processing through a sequence of stages it would be at least possible for certain information to be excluded before it reaches some final stage associated with consciousness" (Bowlby, 1980, p.47).

Emotional support in adulthood

Emotional support appears to be a protective factor in terms of adult psychopathology, and especially in terms of recovery from episodes of psychopathology, (Brugha, Bebbington, MacCarthy, Sturt, Wykes & Potter, 1987; Jablensky, Sartorius, Ernberg, Anker, Korten, Cooper, Day, & Bertelsen, 1992) suggesting that an adult's attachment figures act as "lay psychotherapists", aiding in an informal way the processing of emotionally distressing events.

A pre-requisite for using such support, however, is a preparedness on the part of the individual to seek it out. Most people seek support from partners, relatives and friends (Barker & Pistrang, 1990): in other words, helpers are seen as qualified to provide support not by virtue of any particular expertise but because they are in close emotional relationships with the person seeking support. One of the implications of attachment theory is that some individuals will be relatively less likely to use close social relationships as fora for discussing their emotions. Thus, the relationship between low levels of social support and high levels of psychological difficulties may be mediated by insecure attachment.

Perceptions of social support are only modestly correlated with the amount of support received (Sarason, Pierce, Shearin, Sarason & Waltz, 1991; Parker, Barrett & Hickie, 1992). This may attest either to the influence of internal working models or to an underlying personality characteristic (Henderson, 1981). Taking the view that such perceptions relate to internal working models, we might expect that models developed in early childhood in relation to the caregivers would serve as templates for subsequent social interaction and perception in adulthood. Champion (1995), reviewing the literature on the developmental aspects of social support, argues that the influence of childhood attachment on adult sociability is significant but complex: "although continuities do exist there is also clear evidence of much discontinuity". She believes that the extent and quality of an

individual's social network is a product of developmental processes, particularly (i) social transitions throughout the early years, (ii) broad social influences including sex, culture and class, (iii) individual differences such as the ability to plan and self-esteem, and (iv) external life events. The effects of social transitions in the early years may therefore be discernible in adulthood, but the relevance of the intervening years and the current social environment means that a simple relationship between childhood and adulthood models of others cannot be assumed. With regard to the present study, this suggests that early attachment will predict adult attachment and social support, but perhaps only weakly.

Three measures of social support were used in the present study. One, the Significant Others Scale (Power, Champion & Aris, 1988), is described in the Methodology and is included as Appendix 6. The remaining two were devised by the author for the present study (see Appendices 3 and 4). It was necessary to devise measures of social support based on attachment models because of the lack of such published measures in the literature. Although there are a number of social support measures in existence, most of them examine social support at a given point in time, without attempting to develop explicit links to attachment theory. Similarly, whilst there are a large number of measures of attachment, adult measures of attachment tend to focus on the quality of emotional expression in intimate relationships. They tend not to tap the "secure base" effect whereby individuals make use of social support to process negative affect.

Summary and hypotheses

Drawing together the areas of attachment, trauma, dissociation and social support, we find that there is good evidence for a relationship between dissociation and trauma, both of the Type I variety (a single traumatic event) and the Type II variety (a prolonged sequence of traumatic events such as is found in childhood sexual abuse).

Dissociation following Type I trauma is relatively common and generally (but not always) resolves spontaneously within a matter of days or weeks. Dissociation following Type II trauma may

become habitual, eventually being triggered by otherwise neutral stimuli which have become associated with the original trauma. This is particularly the case where the victims of Type II trauma are children, probably because they have not developed a strong sense of an integrated personality. This pattern of dissociation may eventually manifest in dissociative problems such as those which occur in borderline personality disorder. In addition, a traumatic event in adulthood may resonate with traumatic events from childhood which had been successfully repressed, resulting in a re-traumatization and a re-emergence of dissociation.

It is widely accepted that children who are abused by their caregivers are likely to develop disorganized/disorientated forms of attachment. Such children find themselves in Liotti's (1992) "insoluble paradox", whereby avoidance of the attachment figure results in increasing anxiety, whereas approach to the attachment figure results in frightening behaviour on the part of the attachment figure. These children react in stereotyped, ritualistic ways, perhaps displaying prototypes of dissociation. What is less clear is how the remaining forms of insecure attachment manifest themselves in dissociation. Limited evidence conducted on a non-clinical population suggests that severe forms of dissociation are found in fearfully attached adults, and that less severe forms of dissociation (isolation or repression) occur in avoidant adults. Theoretically there is reason to suppose that absorption is likely to predominate in preoccupied adults, although the results of the study by Coe *et al.* did not support their hypothesis. Do these findings hold true in a clinical population?

Attachment theory also suggests that individuals will use social support in line with their models of others. Can the effects of various patterns of attachment be observed in the use which a clinical population makes of social support? Much of the literature has examined the structure of social support networks without proceeding to examine individuals' attitudes to support. However, there is a case for looking at the mismatch between what individuals want and what they feel they receive

in terms of social support. In terms of attachment theory, avoidant and fearfully attached individuals may want relatively less social support from others, whom they will tend to perceive as unreliable. Preoccupied individuals may wonder whether they can ever draw sufficient strength from those around them to compensate for their perceived weakness. The fact that opposite strategies may exist within a single group demonstrates the need for examining social support strategies in a detailed way.

Hypotheses A number of hypotheses follow from this. The principal hypotheses are that dissociation and social support will each be related in meaningful ways to pattern of attachment.

Attachment It is hypothesized that early attachment, as measured by the Parental Bonding Instrument (see Appendix 1), will be correlated with current attachment as measured by the Bartholemew & Horowitz instrument (see Appendix 2).

- Values of the Care dimension on the Parental Bonding Instrument will be positively correlated with endorsement of both the secure and the preoccupied adult attachment descriptors of the Bartholemew and Horowitz measure;
- Values of the Care dimension on the Parental Bonding Instrument will be negatively correlated with endorsement of the avoidant and fearful adult attachment descriptors of the Bartholemew and Horowitz measure.
- Values of the Over-protection dimension are hypothesized to be positively correlated with fearful and preoccupied adult attachment ratings of the Bartholemew and Horowitz measure.
- Conversely, values of the Over-protection dimension are hypothesized to be negatively correlated with secure and avoidant adult attachment ratings of the Bartholemew and Horowitz measure.

The second set of hypotheses concerns the relationship between the Bartholemew & Horowitz measure of adult attachment and the two attachment-based measures of social support devised for this thesis by the author. These measures are to be found in Appendices 3 and 4.

- **Secure attachment scores,** derived from the Bartholemew & Horowitz measure, will be positively correlated with endorsement of secure social support strategies (Version 1: see Appendix 3); and positively correlated with endorsement of the "openness" factor of Version 2 (see Appendix 4), and negatively correlated with the "self doubt" factor scores.
- **Avoidant attachment scores,** derived from the Bartholemew & Horowitz measure, will be positively correlated with endorsement of the avoidant social support strategies as measured by Version 1 of the attachment-based social support measure. For Version 2, it is hypothesized that avoidant attachment scores will be negatively correlated with values of both the "openness" factor and the "self doubt" factor.
- **Preoccupied attachment scores,** derived from the Bartholemew & Horowitz measure, will be positively correlated with endorsement of the preoccupied social support strategies as measured by Version 1. Preoccupied attachment scores will be positively correlated with values of both the "openness" and the "self doubt" factors on Version 2 of the attachment based measure of social support.
- Finally, **fearful attachment scores** will be positively correlated with endorsement of the fearful social support descriptor score. For Version 2, fearful attachment will be negatively correlated with the "openness" factor score and positively correlated with the "self doubt" factor score.

Dissociation With regard to dissociation, the following hypotheses are advanced:

- **Secure attachment ratings** will be negatively correlated with overall DES score;
- **Fearful attachment ratings** will be positively correlated with overall DES score;
- **Avoidant ratings** will be positively correlated with the isolation factor of the DES;

- **Preoccupied ratings,** by contrast, will be positively correlated with the absorption factor of the DES;
- **fearful attachment ratings** will be positively correlated with the depersonalization and derealization factor of the DES.

Social support With regard to social support, the following hypotheses are suggested:

- **Secure attachment ratings** will be positively correlated with levels of perceived social support, and negatively correlated with the size of the discrepancy between perceived and ideal scores as measured by the Significant Others Scale (see Appendix 6).
- **Avoidant attachment ratings** will be positively correlated with levels of perceived social support and negatively correlated with discrepancy scores.
- **Preoccupied attachment ratings** will be negatively correlated with levels of perceived social support and positively correlated with levels of ideal support.
- **Fearful attachment ratings** will be negatively correlated with levels of perceived social support.
- **Adaptation to trauma** Post traumatic stress disorder is of particular interest from an attachment perspective in terms of the way in which sufferers make use of their attachment figures. Hypotheses regarding these patients are as follows:
- Participants who are in treatment for a Type I trauma are expected to score lower than their non-traumatized psychology patient counterparts for support seeking strategies based on secure attachment, and higher on support seeking strategies based on fearful attachment.
- Similarly, it is hypothesized that the Type I trauma patients will score low on all measures of secure attachment and high on all measures of insecure attachment.

This thesis examines the above variables in both a clinical and non-clinical population. Certain background differences between the groups can be hypothesized.

- BDI II scores and DES scores will be significantly greater in the clinical group, given that the clinical group consists of relatively distressed people referred to psychology services.
- As for attachment, it is hypothesized that the non-clinical group will tend to endorse the secure attachment descriptions more strongly than the clinical group. Conversely, the clinical group is expected to endorse all three insecure forms of attachment more strongly than the non-clinical group.
- In terms of social support, the non-clinical group is expected to enjoy a significantly greater level of social support than the clinical group. Furthermore, discrepancies between perceived and ideal support levels are hypothesized to be significantly less marked in the non-clinical group.

Method

Design A between subjects design was employed. A quantitative approach made possible statistical comparisons between a group of psychology department attendees and a comparison group of adults who had not received treatment for emotional problems. Comparison of the two groups was intended to shed light on the relative importance of personality factors in attachment, social support and dissociation.

Procedure

Participants All participants were between the ages of 18 and 65. Potential participants were excluded from taking part if they had a history of learning disability, organic brain damage or "severe mental illness", defined as a diagnosis of schizophrenia or bipolar disorder. These groups were excluded both on ethical grounds - it would have been difficult to ensure informed consent – and because of difficulties with comprehension of the measures (learning disabled group) or presence of dissociative-like symptoms found in some severe psychiatric illnesses, for example, visual hallucination in schizophrenia.

Recruitment and selection Therapists were asked to consider which of their patients might participate in the research and to discuss the research with these patients.

Out-patient attendees at four psychology departments were invited to participate by the therapists who were involved in their care. The author wrote an information sheet for the benefit of potential participants. The psychology out-patient group was subdivided into two groups, namely (i) those with a presenting problem of Type I trauma who, to the therapist's knowledge, had not been exposed to early Type II trauma; and (ii) the remainder, who were experiencing a range of psychological problems.

The Type I trauma participants were asked to complete an additional measure (Appendix 3b) which examined the use they had made of social support following the traumatic event for which they were receiving treatment.

No set criteria were provided to enable therapists to allocate participants to groups, but guidelines were provided during discussion with participating therapists. By avoiding strict diagnostic categories, it was expected that traumatizing events which would not qualify as stressor events in terms of a post-traumatic stress disorder diagnosis would nevertheless be included in this analysis. For example, abnormal grief reactions would not qualify as PTSD stressor events because, whilst infrequent, they are not outside the range of usual human experience. Even so, abnormal grief is similar to PTSD in many respects: the bereaved person tends to avoid cues associated with the deceased, experiences intrusive thoughts and imagery, and is often affected by over-arousal. PTSD symptoms may also occur in individuals who have been involved in what could be considered a relatively minor event, and certainly one in which there was no threat to the individual's life. For example, an individual who, whilst waiting in their car at a set of traffic lights, is shunted from the rear at slow speed may go on to develop avoidance of driving and intrusive imagery, but the nature of the event may preclude their receiving a diagnosis of PTSD. Similarly, it is only in recent years that the criteria for diagnosis of PTSD have expanded to include the witnessing of events which threaten the lives of others.

Exposure to repeated stressor events (Type II trauma) was determined by the therapist. It was considered unreasonably intrusive to ask participants this question, given that some therapists, perhaps suspecting childhood neglect or abuse, may have decided *not* to address this area. However, an open-ended question was included in the measures which allowed participants to state whether they had been exposed to "*other events, which have occurred in the past, but continue to*

cause significant distress on a regular basis". By including this question, it was intended that participants who had experienced a Type II trauma would be able to indicate this without being required to provide an explicit account of what had occurred.

Patients who decided to participate were given a pack including an information sheet, a consent form and the various measures being used. Packs were returned to the therapists, who then forwarded them to the researcher. Participants were free to discuss their responses with their therapists, if they wanted to. However, the packs could also be sealed, enabling participants to ensure that therapists did not see their responses. The issue of confidentiality was addressed in the information sheet, it being explained that responses to the questionnaires would not be passed on by the researcher. The exception to this rule concerned expressions of suicidality by participants; it was explained that in the case of participants who were actively planning to take their lives, the participant's general practitioner would be informed.

The telephone number of a contact person who was not involved in the research but was aware of its nature was made available so that participants who had questions about the research or who had found completion of the measures upsetting could discuss their concerns with the contact person. The nature of the research was approved by the local ethical committee.

A **comparison group** was recruited from four different sources. These were (i) psychology undergraduates, (ii) attendees at a motorcycling event, (iii) acquaintances of the researcher, and (iv) adult students of two classical guitar teachers. Comparison group participants were asked to participate only if they had not previously received treatment for emotional problems. Each of these groups was considered likely to have particular biases in terms of age, sex or level of education. However, it was anticipated that bias in one subgroup would be largely offset by opposite bias in another. For example, psychology courses are more popular with women than with men, whilst

motorcycle rallies are more popular with men than with women. Undergraduates tend to be relatively young, whereas the adult guitar students spanned a wide age range.

The author deliberately avoided recruiting acquaintances who were trained mental health workers, so this group, like the others, was naïve to the hypotheses underlying the research.

Measures

Attachment was assessed by means of two measures, one of which measured early child-parent attachment, and the other of which measured current attachment with significant others.

Parental Bonding Instrument: The Parental Bonding Instrument (PBI; Parker, Tupling & Brown, 1979; see Appendix 1), discussed in the Introduction, gives rise to two factors, described as "care" and "over-protection".

The authors have demonstrated that it has acceptable test-retest reliability over a three week period (Pearson correlation coefficient of 0.761, $p<0.001$ for the "care" scale; Pearson correlation coefficient of 0.628, $p<0.001$ for the "over-protection" scale); and good validity as assessed by the relationship between scores on the PBI and participants' responses in semi-structured interviews to questions about the quality of their relationships with parents in the first sixteen years (Pearson correlation coefficient of 0.851, $p<0.001$ for the "care" scale; Pearson correlation coefficient of 0.688, $p<0.001$ for the "over-protection" scale). These high correlation coefficients suggest that the Parental Bonding Instrument is a relatively valid measure of attachment experience. Split-half reliability is reported to be high, with a Pearson correlation coefficient of 0.879 ($p<0.001$).

The authors note that scores on each of the factors were not correlated with the respondent's age, suggesting that despite its retrospective nature the PBI was a valid measure of early experience.

Adult attachment: The second measure of attachment, a measure of adult-adult attachment, was that of Bartholemew & Horowitz (1991) (see Appendix 2). This measure assumes a four category model of attachment, with each category being represented in the measure by means of a short descriptive phrase. For example, secure attachment is summarized as follows:

"It is relatively easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me."

Respondents are required to indicate the degree to which they endorse each of the four attachment descriptions by marking a seven point Likert scale anchored at one end by the statement *"Not at all like me"* and at the other by *"Very much like me"*.

The authors were able to demonstrate acceptable validity by comparing responses to their measure with respondents' responses to a semi-structured attachment interview which was the basis for allocating scores on fifteen dimensions. Discriminant analysis showed that the various interview ratings were significantly related to the four attachment groups, correctly classifying 92 per cent of the sample. The authors report that their written measure correctly classified 86 per cent of those whom the semi-structured interview had classified as secure; 94 per cent of those defined as fearful by the semi-structured interview; and 100 per cent of both the dismissing and preoccupied groups.

Scores on the fifteen dimensions from the semi-structured interviews were predictive of the participants' endorsement of conceptually related attachment styles. For example, the interview-derived dimensions of "coherence" and "intimacy" were correlated with endorsement of the "secure" attachment pattern on the paper-and-pencil measure ($r=0.78$, $p<.001$ and $r=0.77$, $p<.001$ respectively). As is the case for the Parental Bonding Instrument, the finding of high levels of correlation between the semi-structured interviews and the endorsement of attachment categories suggests that the Bartholemew and Horowitz measure is a valid measure of adult attachment.

However, reliability, when assessed over an eight month times scale (Scharfe & Bartholemew, 1994), gives rise to only modest test-retest correlations. It is unclear whether this represents genuine fluctuations in attachment pattern, or whether it simply indicates low reliability.

Dissociation was measured with the Dissociative Experiences Scale (DES: Bernstein & Putnam, 1986; see Appendix 5). This scale, discussed in the introduction, is widely used in research on dissociation and has been shown to exhibit good validity and reliability.

Dalenberg *et al.* (1994) have derived four factors from the DES, namely Memory Disturbance, Depersonalization/Derealization, Absorption and Isolation.

The Dissociative Experiences Scale (DES: Bernstein & Putnam, 1986) is a well validated measure which has been widely used in research. It has been shown to exhibit good validity and reliability. Test-retest reliability over a six month period is reported at 0.84 ($p<.0001$). Reliability coefficients between the items are reported to range between .19 and .75, with the median coefficient being .60. Validity was determined by comparing dissociation scores between groups of participants, group membership being determined by diagnosis. (A normal adolescent group was also included because of the relatively high rate of dissociation in this age group.) Dissociation scores were significantly higher in those groups which are characterized by dissociative experiences (sufferers of schizophrenia, posttraumatic stress disorder and multiple personality disorder), suggesting that the DES is a valid measure of dissociation.

Social support was measured by means of the Significant Others' Scale (SOS: Power Champion & Aris, 1988; see Appendix 6). This scale allows the respondent to identify up to seven people who are important sources of support. For each person, the respondent rates perceived and ideal dimensions of support on a seven point scale. Four dimensions of support are rated for each of the

respondent's significant others. Acceptable test-retest reliability has been demonstrated by the authors, with correlations of the four summary support scores ranging between 0.73 and 0.83 over a six month time period.

For the purposes of the present study, this scale has three significant advantages over many measures of social support. Firstly, it measures the structural aspects of a person's support network, i.e. the significant individuals in a person's network. Secondly, it taps the functional aspects of the network, i.e. to what extent the perceived support matches the person's ideal level of support. In this respect, the SOS allows respondents to indicate a perceived *excess* of support as well as a perceived under-provision of support. Thirdly, the SOS identifies three conceptually distinct forms of support, namely, "emotional support", "social fun" and "practical support". Attachment theory is concerned more with emotional support than with an individual's practical support or social fun: practical support and social fun can both occur in the absence of a deep emotional relationship.

From the perspective of attachment theory, the ability of this scale to describe the structural aspect of an individual's support network is important in that avoidant and fearful respondents, with their negative models of others, may be expected to report fewer social supports than secure and preoccupied individuals, who possess more positive models of others.

The SOS also measures the functional aspects of a person's support network. Individuals who describe themselves as avoidant may experience the attempts of others to be supportive as intrusive reminders of an upsetting event. This may cause the avoidant person (who, it will be recalled, may prefer to deal with emotional events privately and, possibly, by a process of defensive exclusion) to describe social support as excessive. In the case of preoccupied individuals, attachment theory proposes that such individuals lack confidence in their ability to manage events which arouse strong emotions but possess confidence in the ability of others to assist them. These individuals are likely to feel particularly vulnerable to abandonment by others and may therefore be expected to report a

relative perceived under-provision of support. The Significant Others Scale is sensitive to discrepancies in both directions.

In the present study, the mean scores for perceived and ideal emotional support were used in the analysis. A score was also calculated reflecting the discrepancy between the perceived and ideal levels of support.

Attachment based measure of social support In addition to the Significant Others Scale, a measure of social support was devised by the author which attempted to tap aspects of attachment (see Appendix 3). It has been suggested in the Introduction that attachment pattern might influence current attitudes towards social support. Although a number of measures of adult attachment have been devised, none specifically addresses the respondent's attitude towards social support and emotional expression from an attachment perspective.

The social support measure was closely based on Bartholemew & Horowitz' measure, but rather than measuring global qualities of relationships, it sought to address respondents' behaviour and attitudes specifically towards social support in the aftermath of upsetting events. By way of example, the item designed to tap social support strategies which might arise from secure attachment states that:

"after an upsetting event it would be relatively easy for me to confide in friends. I am comfortable relying on friends for support form time to time. I don't worry that they will think worse of me if I discuss personal issues."

This description is intended to capture the salient features of secure attachment as they might manifest themselves in terms of support seeking, but remains closely related to the Bartholemew & Horowitz measure (see Table 1). Both statements, for instance, refer to the ease with which one can communicate on an emotional level with others, the acceptability to the respondent of co-dependency, and the degree to which the respondent is concerned about evaluations of others.

Table 1: Prototype descriptions of attachment patterns: Bartholemew and Horowitz measure and Attachment-Based Measure of Social Support

Attachment Pattern	Bartholemew & Horowitz descriptors	Attachment based measure of social support	Salient features being measured
Secure	It is relatively easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me.	After an upsetting event it would be relatively easy for me to confide in friends. I am comfortable relying on friends for support from time to time. I don't worry that they will think worse of me if I discuss personal issues.	Acceptability of emotional involvement Acceptability of co-dependence / dependency in times of difficulty Concern about evaluations of others
Avoidant	I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.	After an upsetting event I prefer to deal with it myself. I would not want to discuss it with friends, and I would find it upsetting if friends talked about it to me.	Difficulty with emotional relationships "Compulsive independence" (Avoidance of cues related to upsetting event: attachment based social support measure)
Preoccupied	I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.	After an upsetting event I would definitely talk to friends about it. Talking about the event would make me feel better. However, my friends may not be able to provide as much support as I would ideally like.	Preoccupation with close emotional relationships Confidence in others Lack of confidence in self
Fearful	I am somewhat uncomfortable getting close to others, I want emotionally close relationships, but I find it difficult to trust others completely or to depend on them. I sometimes worry that I will be hurt if I allow myself to become too close to others.	After an upsetting event I would like to feel able to talk to my friends about it, but at the same time I would find it difficult to trust them. I would not want to open up completely to them, but it would perhaps be better for me if I could.	Lack of a coherent strategy "Approach-avoidance" dilemmas No confidence in others Self is perceived as vulnerable

As in the Bartholemew & Horowitz measure, a seven point Likert scale allowed respondents to represent their own attitudes by differentially endorsing each of the four items.

Another version of this measure was given to victims of Type I trauma (see Appendix 3), with minor modifications to the wording so that the measure related specifically to the traumatic event for which the respondent was receiving treatment. This made it possible to analyze the participant's

response to the trauma separately to the participant's general response style to upsetting events that had not resulted in traumatization.

A difficulty with both of the measures described above is that, although each statement consists of a number of sub-statements, the respondent is asked to assign an overall score to each of the statements. This format does not allow a respondent to endorse one element of a given descriptor whilst expressing disagreement with another: for example, a respondent cannot describe him or herself as being very comfortable depending on others, but feeling uncomfortable when others are depending on the respondent. For this reason, a fourth measure of attachment was devised, this being a twelve item scale, with the items compiled by breaking down the multi-faceted descriptions from the previous measure into separate statements. A four point Likert scale was provided, anchored by "completely agree" and "completely disagree". A fifth column allowed for "Don't know" responses. It was hypothesized that the frequent endorsement of a "don't know" column might be an expression of the fearful respondents' disorganized attachment-related schemata.
This measure is included in the Appendices as Appendix 4. Examples of items include *"I prefer to deal with my emotions by myself"* and *"Talking to others helps me make sense of an emotionally difficult time"*.

By providing a multi-item scale, respondents were enabled to endorse "statement *x*" whilst not endorsing "statement *y*". This allowed respondents to define themselves more accurately than they were perhaps able to do using the format described earlier.

It should be emphasized that these measures of social support, whilst based on principles derived from attachment theory, are not designed as measures of attachment *per se*. Instead, they aim to measure attitudes towards seeking out social support which might be generated by underlying attachment patterns.

Additional measures Two measures were administered in order to control for the effects of mood and exposure to life events. Mood is thought to affect recall of past material (Lloyd & Lishman, 1975), whilst exposure to negative life events may result in changes in attachment pattern (Feener & Nolley, 1996) and level of dissociation (van der Kolk, 1996). Measures used were the Beck Depression Inventory II (Beck, Steer & Brown, 1996; see Appendix 7) and the Life Events Inventory (Cochrane & Robertson, 1973; Appendix 8).

The Beck Depression Inventory (BDI) is a well known measure of mood, frequently used in research and clinical work. Reliability of the updated version, the BDI-II, is high, with a co-efficient alpha of 0.92. One reported improvement of the BDI II over its predecessor is that it exhibits a more normal distribution of values. It is also sensitive to both poles of various depression-sensitive behavioural dimensions where its predecessor was sensitive to only one. For example, the revised BDI groups together pairs of alternative statements such as "I have no appetite at all" – "I crave food all the time", and "I sleep a lot more than usual" – "I sleep a lot less than usual".

The Life Events' Inventory (Cochrane & Robertson, 1973; see Appendix 8) consists of 48 items consisting of typical life events. The respondent is asked to indicate which, if any, of the events has occurred in the previous six months. A tick indicates an event which has had a perceived positive effect on the respondent's life, whilst negative events are indicated with a cross. In addition, an open-ended question allows the respondent to identify unspecified significant events within the six month time frame, and whether they have had a perceived positive or negative effect.

Basic demographic information (see Appendix 9) was collected which included the respondent's age, sex, occupation and level of education. This made it possible to control for age, sex or class-related effects in the subsequent analysis. There is evidence that each of these variables is related to dissociation, making it important to control for any possible effects arising from them. Finally, an open-ended question was added to the Life Events Inventory as a way of allowing participants to indicate whether they had experienced events at any point in the past which continued to cause significant distress. Participants were invited to specify the nature of any such events, but were also able to indicate whether such events had occurred without providing details. The purpose of this question was to make it possible for participants to flag up past trauma without the researcher having to address this issue directly: this was considered too intrusive.

Results

Analysis

Responses were analyzed using the statistical software package, SPSS (SPSS for Windows, version 6.1.3, 1995).

Between-group differences were examined by means of two-tailed t-tests and ANOVA tests. Strictly speaking, ANOVA tests assume homogeneity of variance and normal distribution, though in practice they are quite robust (Howell, 1997), particularly when sample sizes are more or less equal, as is the case in this thesis.

Pearson correlations were used to test the strength of associations between particular variables. Pearson correlations are suitable for testing associations between variables which are linearly related (Howell, 1997). Given the nature of the measures, such a relationship appeared most likely. Multiple regression (Howell, 1997) was employed to determine the relative statistical importance of background variables such as age, education and group membership within the combined sample, along with the attachment, social support and dissociation variables.

Results

First, general characteristics of the comparison and out-patient groups will be described. Then, the results relating to the hypotheses under investigation will be reported.

Group characteristics

Twenty one psychology out-patients and twenty four comparison individuals participated. A Chi-Square test indicated that there was no significant difference between the groups in terms of sex (Chi Square = 0.02, $p > .05$). The two groups were comparable in terms of age (df 1,44; $F = 3.80$; $p > .05$). A significant difference was observed between the groups in terms of education, with the

comparison group having spent significantly longer in education than the out-patient group (df 1,44; $F = 4.52$; $p<.05$) (see Table 2).

Table 2: Demographic features of groups

Variable	**Control Group (N = 24)**	**Psychology Out-patient group (N = 21)**
Age	Mean = 32.3 Range 20 to 52; SD = 9.36	Mean = 38.4 Range = 21 to 63; SD = 11.4
Education: no. years in education after age 16	Mean = 5.79 years Range 0 to 12; SD = 2.98	Mean = 3.95 Range 0 to 11; SD = 2.61
Sex	Male N = 12 Female N = 12	Male N = 11 Female N = 10
BDI	Mean 4.75 SD 4.88	Mean 22.14 SD 13.10
DES	Mean 10.04 SD 8.07	Mean 13.38 SD 12.24

As would be expected, the psychology out-patient group, receiving treatment on account of psychological distress, scored significantly higher on the Beck Depression Inventory (df = 1,44; $F = 36.6$, $p<.001$); however, no significant difference emerged between the groups on the Dissociative Experiences Scale (df = 1,44; $F = 1.19$, $p>.05$) (see Figures 2 and 3).

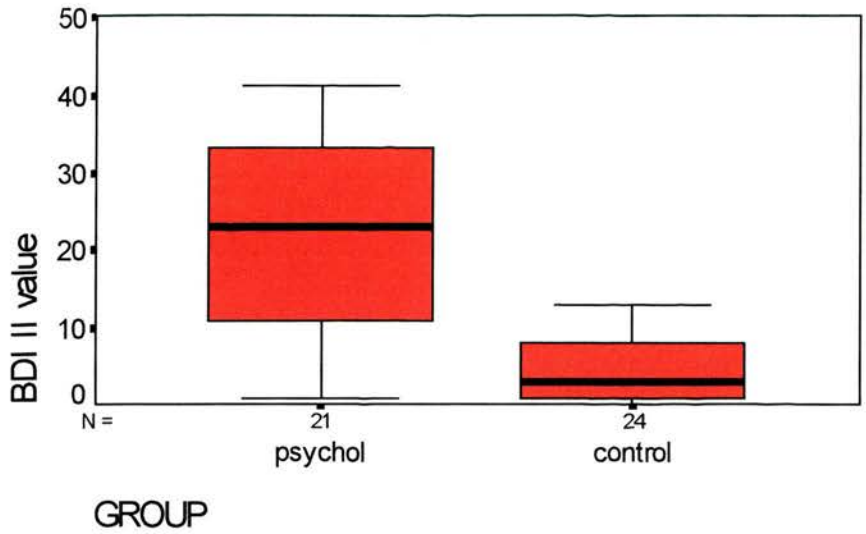


Figure 2: Boxplot of Beck Depression Inventory II scores by group

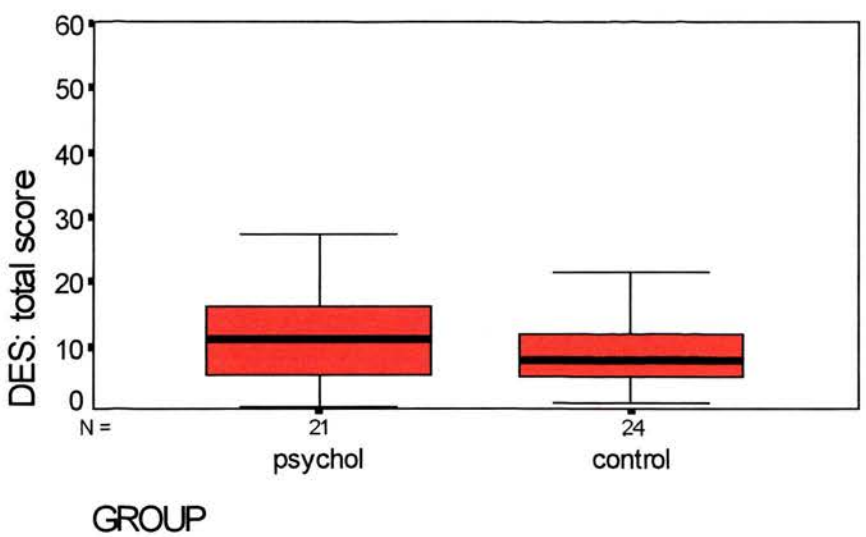


Figure 3: Boxplot of Dissociative Experiences Scale scores by group

Attachment Measures

Significant differences emerged between the groups on each of the measures of attachment. These are summarized in Tables 3 to 5. These differences support the hypothesis that attachment problems would be more pronounced in the psychology group than in the comparison group.

Table 3: Care and Over-protection values of Parental Bonding Instrument: psychology and comparison groups

Parental Bonding Instrument	**Control Group N = 24**	**Psychology Group N = 21**	**t-test results**
Care scale (mother)	Mean 28.29 SD 5.92	Mean 21.55 SD 12.50	**t=2.21** **p<.05**
Care scale (father)	Mean 24.78 SD 7.45	Mean 16.26 SD 11.07	**t=2.86** **p<.01**
Over-protection (mo.)	Mean 10.08 SD 4.96	Mean 16.00 SD 8.67	**t=2.71** **p<.05**
Over-protection (fa.)	Mean 10.83 SD 7.75	Mean 16.79 SD 9.11	**t=2.29** **p<.05**

The above table demonstrates significant differences between the two groups in the expected directions. The comparison group reported significantly higher levels of paternal and maternal care than did the psychology group, and significantly lower levels of paternal and maternal care than the psychology group.

Table 4: Mean values of endorsement of attachment prototypes (Bartholemew and Horowitz) : psychology and comparison groups

Bartholemew & Horowitz	Control Group N = 24	Psychology Group N = 21	t-test results
Secure	Mean 4.38 SD 1.61	Mean 2.86 SD 1.46	**t=3.30** **p<.005**
Avoidant	Mean 3.88 SD 1.73	Mean 3.33 SD 1.71	t= 1.05 p > .10
Preoccupied	Mean 3.08 SD 1.95	Mean 3.95 SD 1.88	**t= 2.34** **p<.05**
Fearful	Mean 3.67 SD 1.76	Mean 4.90 SD 1.79	**t=2.34** **p< .05**

Table 4 suggests that these early attachment experiences are carried forward into adulthood. The comparison group endorsed the "secure" prototype significantly more strongly than did the psychology group. Conversely, the psychology group identified more strongly with the "preoccupied" and "fearful" descriptors than did the comparison group, as hypothesized. However, no significant difference was found in terms of avoidant attachment, contrary to the hypothesis.

The attachment-based measure of social support also revealed differences between the two groups, with the comparison group endorsing secure strategies more strongly, and ~~avoidant~~ preoccupied and fearful strategies less strongly, than the psychology group (see Table 5). In this instance, no significant difference between the two groups was observed in endorsement of the ~~preoccupied~~ avoidant descriptor. This is contrary to the hypothesis, which suggested that all forms of insecure attachment would be endorsed significantly more strongly by the psychology group than by the comparison group.

Table 5: Values of attachment-based measure of social support: psychology and comparison groups (see previous page for discussion)

Attachment-based measure of social support	**Control Group N = 24**	**Psychology Group N = 21**	**t-test results**
Secure	Mean 5.50 SD 1.47	Mean 3.52 SD 1.91	**t=3.84** **p<.001**
Avoidant	Mean 2.79 SD 1.69	Mean 3.95 SD 1.77	**t=2.71** **p<.05**
Preoccupied	Mean 4.33 SD 1.24	Mean 3.71 SD 2.05	t=1.20 p>.10
Fearful	Mean 2.75 SD 1.70	Mean 4.81 SD 1.54	**t=4.24** **p<.001**

As expected, the comparison group reported significantly higher levels of early parental care and

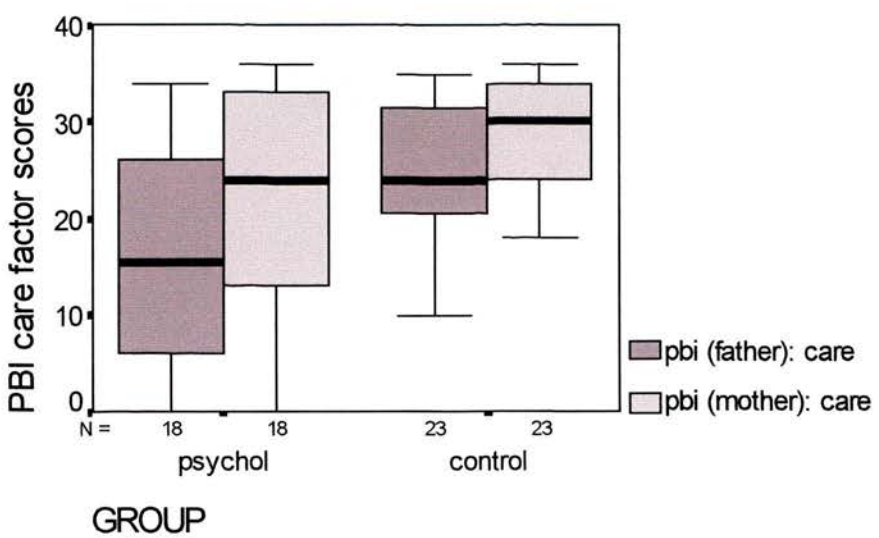


Figure 4: Parental Bonding Instrument scores by group (care factor)

lower levels of parental over-protection than did the psychology group (see Figures 4 and 5).

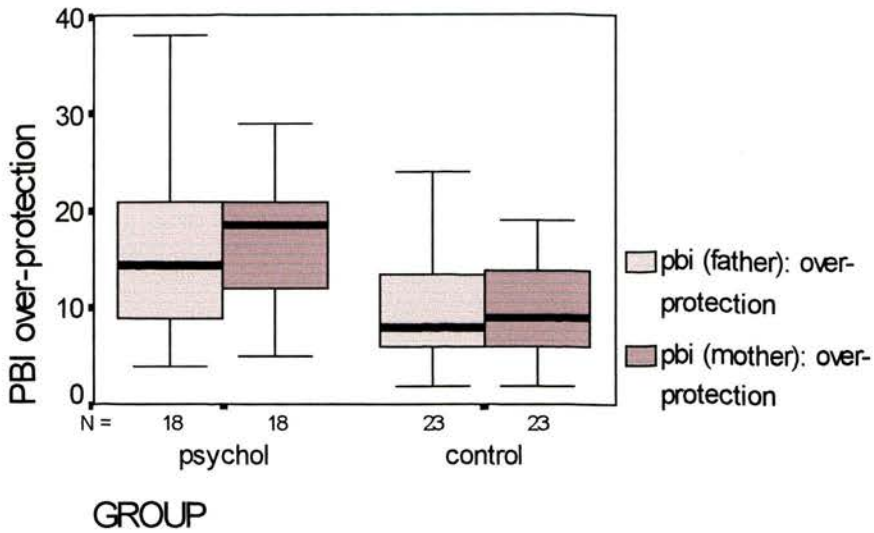


Figure 5: Parental Bonding Instrument scores by group (over-protection factor)

With regard to current attachment, the comparison group reported significantly higher levels of secure attachment and lower levels of preoccupied and fearful attachment than did the psychology group. No significant difference was observed in terms of avoidant attachment (see Figure 6).

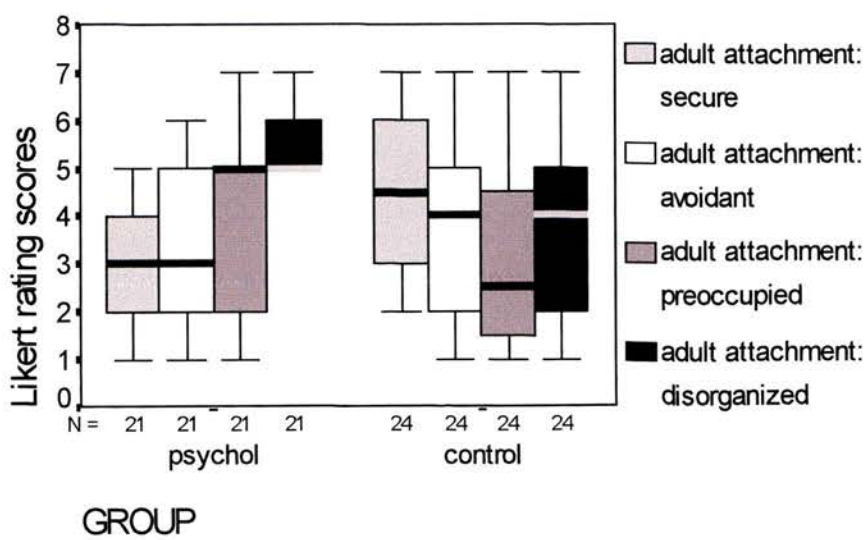


Figure 6: Bartholemew and Horowitz measure of attachment by group

Finally, the attachment-based measure of social support also differentiated between the comparison and psychology groups, with the comparison group reporting significantly higher levels of secure use of social support, and significantly lower levels of avoidant and fearful attitudes towards social support than the psychology group. No significant difference was found between the groups in terms of preoccupied use of social support (see Figure 6).

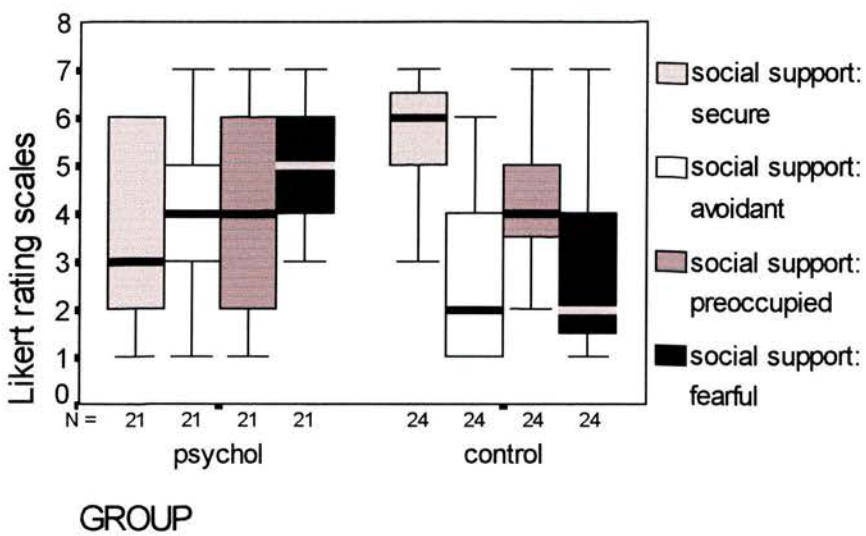


Figure 7: Attachment based measure of social support

Relationship between measures of early and current attachment: groups combined

- **Parental Bonding Instrument by Current Attachment measure**

It was hypothesized that the Parental Bonding Instrument would predict attachment as measured by the Bartholemew and Horowitz measure. Pearson's correlations were used to test for associations between the variables. Responses from all participants were combined for these analyses.

As hypothesized, reported high levels of early care were significantly correlated with endorsement of the current secure attachment style (fathers: $r = .50$, $p = .001$; mothers: $r = .50$, $p = .001$). Low levels of early over-protection were also correlated with endorsement of the current secure attachment style (fathers: $r = -.57$, $p < .001$; mothers: $r = -.46$, $p < .005$).

Endorsement of the current fearful attachment style was also related to reported early experience of care and over-protection. With regard to care, fathers' care was negatively correlated with current fearful attachment ($r = -.62$, $p < .001$), as was mothers' care ($r = -.47$, $p = .001$). Fathers' and mothers' over-protection was correlated with fearful attachment (fathers: $r = .53$, $p < .001$; mothers: $r = .33$, $p < .05$). This supports the hypothesis.

It was hypothesized that current avoidant attachment would be predicted by low levels of early care and low levels of early over-protection. However, no significant correlations emerged between these variables, thus the hypothesis is not supported.

It was also hypothesized that current preoccupied attachment would be predicted by high levels of early care and high levels of early over-protection. High levels of over-protection were correlated with current preoccupied attachment. A significant correlation was obtained only with respect to fathers ($r = .35$, $p < .05$); for mothers, over-protection was not significantly related to current preoccupied attachment ($r = .28$, $p > .05$). Early levels of care were significantly correlated with current endorsement of preoccupied attachment – but in the opposite direction to that which was expected (fathers: $r = -.44$, $p < .005$; mothers: $r = -.46$, $p < .005$). Therefore the hypothesis is partially upheld.

A full table of correlations is presented in Appendices 12 and 13.

Relationship between measures of attachment and social support strategies

- **Current attachment measure by attachment-based measure of social support**

It was hypothesized that endorsement of the Bartholemew and Horowitz prototype attachment descriptors would be correlated with the corresponding attachment-based descriptors of social support strategies developed by the author. Again, Pearson's correlations were used to test for associations in the combined sample.

Secure attachment as measured by the Bartholemew and Horowitz measure was significantly correlated with a secure strategy for use of social support, as measured by the author's four category instrument ($r = .48$, $p = .001$).

Fearful attachment was significantly correlated with fearful strategies relating to social support ($r = .63$, $p < .001$).

Significant correlations were not obtained between avoidant current attachment and avoidant-type strategies of social support, nor between preoccupied current attachment and preoccupation with social support.

Thus, the hypotheses are supported as they relate to secure and fearful attachment, but not with regard to avoidant and preoccupied attachment.

A complete table is presented in the appendices (Appendix 13).

- **Multi item measure of social support**

The attachment-based four category measure of social support was used as the basis for a multi-item scale of social support (see Appendices 4 and 11). Principal components factor analysis with no rotation yielded a two-factor solution in which nine items contributed at between .58 and .87 to

Factor 1, whilst three items loaded at between .50 and .76 on Factor 2. Every item loaded at less than .50 on the remaining factor. Full results are presented in Appendix 11. Ratio of items to sample size was 1:3.75, and thus the results of the factor analysis must be viewed with some caution.

Content analysis suggested that Factor 1 represented the respondent's attitude towards open emotional expression, and is therefore termed "openness". Typical items included "*After an upsetting event it would be relatively easy for me to confide in close friends*" and *"I prefer to deal with my emotions by myself"*. Content analysis of Factor 2 revealed that these items were more related to the respondent's concern about him / herself: for example, *"I worry that close friends would dislike me in some way if I confided in them after an upsetting event"* and *"I doubt my ability to deal with strong emotions by myself"*.

Guttman split-half reliability for the "openness" factor was .83, whilst for the "self-doubt" factor it was .60. Test-retest reliability was not assessed.

The scale was validated by correlating the factors with the Bartholemew and Horowitz measure and with the Parental Bonding Instrument.

Bartholemew and Horowitz measure: It was hypothesized that secure attachment would be positively correlated with the "openness" factor of the multi-item measure and negatively correlated with the "self-doubt" factor. As expected, secure attachment, as defined by the Bartholemew and Horowitz measure, was significantly positively correlated with the "openness" factor ($r = .29$, $p = .05$) and significantly negatively correlated with the "self-doubt" factor ($r = -.31$, $p < .05$), thus supporting the hypothesis.

The hypothesis regarding avoidant attachment was that this style would be negatively correlated with both the "openness" factor and the "self-doubt" factor. Conversely, preoccupieds were hypothesized to score high on "self-doubt" and high on "openness". In fact, correlations between

the attachment based measure of social support factors and avoidant and preoccupied attachment patterns were non-significant.

Finally, it was hypothesized that fearful attachment as determined by the Bartholemew and Horowitz measure would be significantly negatively correlated with the "openness" factor and significantly positively correlated with the "self-doubt" factor. This hypothesis was supported, with "openness" being negatively correlated with endorsement of the fearful descriptor ($r = -.45$, $p < .005$) and "self-doubt" being positively correlated ($r = .40$, $p < .01$).

Parental Bonding Instrument: It was hypothesized that high levels of early care would result in positive models of others. This in turn would be associated with high scores on the "openness" factor of the social support measure. The results show that the "openness" factor was positively correlated with early paternal care ($r = .37$, $p < .05$) as measured by the Parental Bonding Instrument, but not with early maternal care ($r = .15$, $p > .05$), and thus partially support the hypothesis.

Levels of early overprotection, it was suggested, would be positively correlated with levels of self doubt because of the relative lack of opportunities the child has to master its environment. It was hypothesized that this would be evident in the "self doubt" factor of the social support measure.

However, the relationship between over-protection and self doubt was not significant (maternal over-protection and self-doubt: $r = .26$, $p > .05$; fathers: $r = .23$, $p > .05$). The "self-doubt" factor was found to be negatively correlated with paternal and maternal care ($r = -.46$, $p < .005$, and $r = -.33$, $p < .05$, respectively), although this association was not predicted.

Dissociation

The hypotheses concerning dissociation and attachment were as follows:

Overall Dissociative Experiences Scale (DES) scores would be negatively correlated with endorsement of the secure attachment prototypes and positively correlated with the fearful descriptors.

Endorsement of the avoidant descriptor was hypothesized to be positively correlated with dissociative experiences characterized by isolation as measured by the DES.

Endorsement of the preoccupied descriptor was hypothesized to be positively correlated with dissociative experiences characterized by absorption as measured by the DES.

Finally, endorsement of the fearful descriptor was hypothesized to be positively correlated with depersonalization and derealization experiences as measured by the DES.

Relationship of current attachment to dissociation Within the combined sample, secure attachment was significantly and negatively correlated with all forms of dissociation, in line with the hypothesis. Also supporting the hypothesis, fearful attachment was significantly positively correlated with all the sub-factors of the DES. However, avoidant attachment was not significantly correlated with the isolation sub-factor of the DES, nor with any of the remaining sub-factors. Preoccupied attachment was positively correlated with all of the DES sub-factors apart from the depersonalization / derealization factor (see Table 6). These results do not support the specific hypotheses relating particular patterns of attachment to particular forms of dissociation. However,

they do emphasize the significance of secure *vs.* insecure attachment, and in particular the distinction between secure (double positive working models) and fearful (double negative working models) attachment.

Table 6: Current attachment by Dissociative Experiences Scale factors (combined sample)

	Secure Attachment	Avoidant Attachment	Preoccupied Attachment	Fearful Attachment
DES: total	**r = -.40** **p < .01**	r = .01 p > .10	**r = .47** **p = .001**	**r = .47** **p = .001**
DES: memory	**r = -.40** **p < .01**	r = .04 p > .10	**r = .53** **p < .001**	**r = .37** **p <.05**
DES: absorption	**r = -.44** **p < .005**	r = .13 p > .10	**r = .36** **p < .05**	**r = .48** **p = .001**
DES: isolation	**r = -.44** **p < .005**	r = .16 p > .10	**r = .44** **p < .005**	**r = .42** **p < .005**
DES: depersonalization	**r = -.44** **p < .005**	**r = .42** **p < .005**	r = .24 p > .10	**r = .42** **p < .005**

Relationship of early attachment to dissociation It was hypothesized that relationships would exist between the Parental Bonding Instrument and the DES, but that these might be quite weak. However, within the combined sample, early attachment as measured by the Parental Bonding Instrument was significantly related with most of the subfactors of the Dissociative Experiences Scale (see Table 7, following page).

Again, the specific links between particular aspects of early attachment and tendency to experience particular forms of dissociation do not emerge; for example, absorption was argued to be associated

with high levels of parental care and over-protection, whereas the results show that absorption is in fact related to *low* levels of care and high levels of over-protection.

Table 7: Parental Bonding Instrument scores and Dissociative Experiences Scale factors (combined sample)

	Care (Mother)	Care (Father)	Over-protection (Mother)	Over-protection (Father)
DES: memory	**r = -.57** **p < .001**	**r = -.42** **p = .005**	**r = .50** **p < .001**	**r = .43** **p = .005**
DES: absorption	**r = -.35** **p < .05**	**r = -.43** **p < .005**	r = .23 p > .10	**r = .46** **p < .005**
DES: isolation	**r = -.49** **p = .001**	**r = -.55** **p < .001**	**r = .42** **p < .005**	**r = .38** **p < .05**
DES: depersonalization	**r = -.44** **p < .005**	**r = -.46** **p < .005**	**r = .37** **p < .05**	**r = .42** **p < .01**

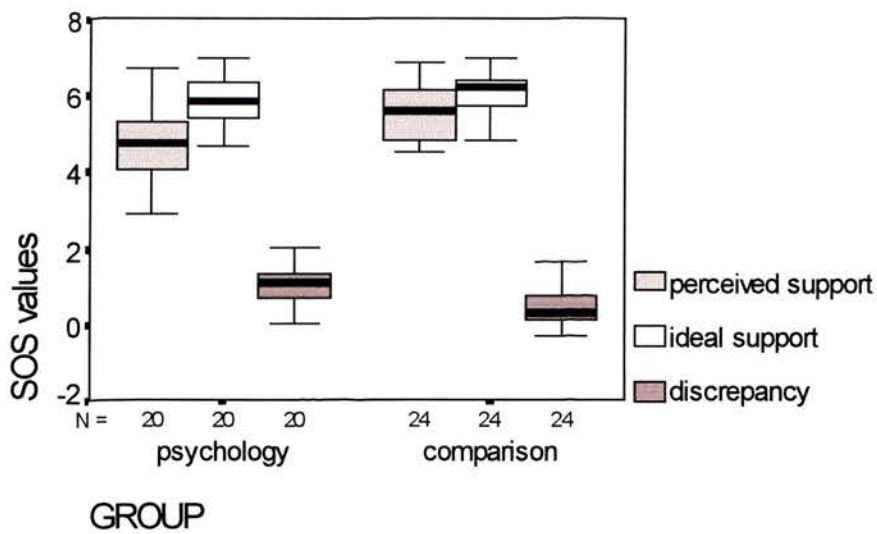
Social Support

Significant Others Scale: It was hypothesized that discrepancies between perceived and ideal levels of emotional support would be significantly lower in the comparison group than in the psychology out-patient group. ANOVA testing revealed a significant difference between the two groups ($F = 10.71$; $df = 1,44$; $p < .005$) in the expected direction; in other words, the psychology

group felt that there was a greater discrepancy between their perceived and desired social support than did the comparison group.

No significant difference was observed between the groups in terms of ideal levels of emotional support ($F = 1.35$; $df = 1,44$; $p > .05$), but the psychology group perceived a significantly lower level of emotional support than did the comparison group ($F = 10.19$; $df = 1,44$; $p < .005$) (see Figure 7).

Figure 7: Boxplot of Significant Other Scale values by group



A second set of hypotheses concerned the relationship between attachment pattern and level of social / emotional support. Specifically, it was hypothesized that endorsement of the secure prototypes would be correlated with high levels of perceived social support and low levels of discrepancy between perceived and ideal support. Pearson's correlation testing showed that for the combined sample secure attachment was significantly positively correlated with perceived level of

support ($r = .531$, $p < .001$) and significantly negatively correlated with discrepancy scores ($r = -.43$, $p < .005$), thus supporting the hypothesis.

Avoidant and fearful individuals were hypothesized to make less use of social support than secures due to their negative models of others. In terms of the Significant Others Scale this should be reflected in lower levels of perceived and ideal support. Endorsement of the avoidant attachment items was negatively correlated with ideal levels of social support, as hypothesized ($r = -.30$, $p < .05$), but was not significantly correlated with perceived support. Endorsement of the fearful descriptor was not significantly related to ideal levels of support, ($r = -.29$, $p > .05$), contradicting the hypothesis. However, in line with the hypothesis, a significant positive correlation was found between endorsement of the fearful prototype and discrepancy between ideal and perceived levels of support ($r = .38$, $p = .01$).

It was hypothesized that preoccupied individuals would seek out and wish for high levels of support. Their high confidence in others combined with low self confidence was hypothesized to give rise to beliefs that the constant support of others was necessary to them. For this reason it was hypothesized that discrepancy values might also be significantly associated with preoccupied attachment. Whilst significant correlations were not observed between preoccupied attachment and perceived emotional support or ideal level of support, a significant correlation did emerge with regard to the discrepancy between perceived and ideal levels of support ($r = .31$, $p < .05$), as hypothesized.

Relationship between social support strategies and dissociation Within the combined sample, social support strategies based on secure, avoidant and preoccupied working models, as measured by the author's attachment-based four category social support measure, were unrelated to particular

forms of dissociative experiences. However, social support seeking based on fearful strategies was significantly related to dissociative experiences (see Table 8).

Using the multi-item measure, the "openness" factor was unrelated to any of the dissociative factors, but the "self-doubt" factor was significantly correlated with memory disturbance ($r = .34$, $p < .05$), depersonalization / derealization ($r = .38$, $p = .01$), and isolation ($r = .34$, $p < .05$). A trend towards significance was found between "self-doubt" and absorption ($r = .27$, $p < .10$).

Table 8: Correlations between social support strategies and Dissociative Experiences Scale factors (combined sample)

	Secure social support	Avoidant social support	Preoccupied social support	Fearful social support
DES: memory	r = -.08 p > .10	r = -.01 p > .10	r = .18 p > .10	**r = .41** **p = .005**
DES: absorption	r = .04 p > .10	r = -.05 p > .10	r = .18 p > .10	**r = .37** **p < .05**
DES: isolation	r = -.08 p > .10	r = .05 p > .10	r = -.08 p > .10	**r = .32** **p < .05**
DES: depersonalization	r = -.20 p > .10	r = .12 p > .10	r = .13 p > .10	**r = .41** **p < .005**

Type I trauma patients Few of these patients participated in the study (N = 5), and therefore the results presented up to this point have referred to data derived from the combined trauma and non-trauma patients. The very low number of trauma participants means that a qualitative approach may

have been better suited to this sample. However, a number of hypotheses were advanced concerning the trauma group. A statistical analysis was therefore conducted, although the results, based on such a small sample, must be taken as preliminary. Further research is clearly required to examine the relationship between outcome following trauma and attachment pattern.

First, it was suggested that poor outcome following a trauma might relate to problems in seeking social support. These problems might be pervasive, or might apply specifically to seeking support in connection with the traumatic event.

Second, it was hypothesized that problems in seeking social support might be expressions of underlying attachment difficulties.

Two tailed t-tests were used to test for differences between the non-traumatized and traumatized members of the psychology group. Levene's test was used to determine homogeneity of variance within each sample, and reported values of *t* are adjusted accordingly.

As hypothesized, the trauma group endorsed the secure social support strategies less strongly than the psychology group ($t = 2.58$; $df = 1,24$; $p < .05$). They also endorsed the avoidant item more strongly ($t = 2.85$; $df = 1,24$; $p < .05$). Differences between the groups were not found for the preoccupied or fearful social support strategies. The results therefore partially support the hypotheses.

It will be recalled that the trauma group completed a second measure of social support strategies which addressed their attitudes towards support-seeking specifically in relation to the trauma. It was hypothesized that poor outcome following trauma might be associated with problems in seeking social support specifically in relation to the trauma. However, this hypothesis was not supported (see Table 9). Patterns of social support seeking were similar for day-to-day upsetting events and for the traumatic event itself. Paired sample t-tests revealed no significant differences between the two measures.

The second hypothesis, that the trauma group's difficulty with seeking social support was associated with underlying attachment difficulties, was tested by using a one-way ANOVA test to compare

their ratings of current attachment with the ratings of the psychology group. Significant differences were not observed between the groups.

Table 9: Comparison of trauma group's strategies for social support: "upsetting events" *vs.* "trauma": $N = 5$

Social support descriptors	Social support strategy scores (general)	Social support strategy scores (trauma-specific)
Secure	Mean 2.4 S.D. 0.6	Mean 2.0 S.D. 0.7
Avoidant	Mean 5.0 S.D. 0.0	Mean 5.2 S.D. 1.1
Preoccupied	Mean 3.2 S.D. 1.8	Mean 2.4 S.D. 1.5
Fearful	Mean 5.2 S.D. 0.5	Mean 5.4 S.D. 0.9

Regression analysis

In this section, the results of regression analyses are reported. Howell (1997) warns against demanding too much of regression analysis by including a large number of predictor variables in the equation. Therefore, two sets of regression analyses were undertaken. Values of $p < .10$ are reported. Full results are reported in Appendix 14.

Research has been discussed in the introduction which suggests that dissociation may be negatively correlated with age, male gender and level of education. In addition, recent negative life events may explain some of the variance in dissociative experiences. Finally, some research has also suggested that dissociation may be related to general level of psychopathology. Therefore, in the first set of analyses, the dissociation measures were used as dependent variables, and "background" variables

were entered into the equation as independent variables: these were sex, age, education, group (comparison *vs.* psychology group, including trauma patients), mood, and life events.

In the second set of analyses, measures of attachment and social support were entered as independent variables, with measures of dissociation being entered as dependent variables.

Final equations are presented in this section, with complete tables of backward stepwise regression being presented in the appendices.

Dissociation and background variables BDI score and group membership were the only two variables which contributed significantly to the regression equation for total DES score.

Table 9: Final equation of total DES score and significant predictor variables

Variable	Multiple *r*	r^2	Beta	Signif.level
BDI	.50	.26	.50	$p < .0005$
Group	.56	.31	.33	$p < .10$

For the memory disturbance factor of the DES, BDI score and number of negative life events were the only significant predictors.

Table 10: Final equation of DES memory disturbance score and significant predictor variables

Variable	Multiple *r*	r^2	Beta	Signif.level
BDI	.55	.31	.55	$p = .0001$
Negative life events	.66	.44	.36	$p < .05$

The isolation factor of the DES was predicted by three background variables: BDI score, age and number of negative life events.

Table 11: Final equation of DES isolation factor and significant predictor variables

Variable	Multiple *r*	r^2	Beta	Signif.level
Negative life events	.70	.49	.70	$p < .0001$
BDI	.75	.55	.29	$p < .05$
Age	.80	.64	-.30	$p < .10$

Absorption, as measured by the DES, was significantly predicted by number of negative life events, BDI score and group membership.

Table 12: Final equation of DES absorption factor and significant predictor variables

Variable	Multiple *r*	r^2	Beta	Signif.level
Negative life events	.58	.34	.58	$p < .0001$
BDI	.60	.36	.20	$p < .05$
Group	.66	.44	.37	$p < .10$

Finally, the depersonalization and derealization factor of the DES was significantly predicted by negative life events, BDI and age.

Table 13: Depersonalization and derealization factor of DES and significant predictor variables

Variable	Multiple *r*	r^2	Beta	Signif.level
Negative life events	.73	.53	.72	$p < .0001$
Age	.76	.58	-.22	$p < .05$
BDI	.81	.65	.34	$p < .005$

Dissociation and current attachment The preceding analysis suggested that two of the background variables were particularly predictive of dissociation scores on all of the factors; these background variables were the BDI score and the number of negative life events in the preceding six months. Therefore, in the following set of analyses, these two background variables and the current attachment ratings (Bartholemew and Horowitz) were entered into a regression equation. Non-significant predictors of dissociation were removed stepwise. The significance of attachment variables is reported either at the point before they were removed from the equation or at the point at which they made a significant contribution to the equation. Regression tables are presented in the appendices.

Overall DES score was significantly associated with only two of the variables, namely preoccupied attachment ($t = 2.56$, $df = 1,44$; $p = .01$) and BDI score (2.95, $df = 1,44$, $p = .005$).

It was hypothesized that the isolation factor of the DES would be significantly associated with avoidant attachment, but when the adult attachment variables were entered as independent variables along with the two background variables, avoidant attachment did not make a significant contribution to the equation ($t=.08$, $df = 1,44$, $p > .10$). This does not support the hypothesis.

Absorption was predicted to be associated with preoccupied attachment. Preoccupied attachment style did not make a significant contribution to the equation ($t = 1.50$; $df = 1,44$; $p > .10$), going against the hypothesis.

Depersonalization and derealization were hypothesized to be related to fearful attachment. With the two background variables and the four adult attachment patterns entered, fearful attachment made a non-significant contribution ($t = .26$, $df = 1,44$, $p > .10$).

Dissociation and social support strategies All four forms of attachment-based social support strategy were entered into the equation along with the two factors from the multi-item measure and the two background variables. Only mood as measured by the BDI made a significant contribution to overall DES score ($t = 3.84$; $df = 1,44$; $p < .0005$).

The isolation factor of the DES was not significantly predicted by any of the attachment measures, with avoidant attachment being dropped from the equation before reaching significance ($t = 0.08$; $df = 1,44$; $p > .10$). This goes against the hypothesis that avoidant social support strategies are associated with the isolation factor of the DES.

It was hypothesized that absorption would be associated with a preoccupied attachment pattern, but the regression analysis dropped preoccupied attachment from the equation before it attained significance ($t = 1.50$, $df = 1,44$, $p > .10$). Therefore the hypothesis is not supported.

Finally, it was hypothesized that fearful social support strategies would be associated with depersonalization and derealization on the DES. However, this variable did not contribute significantly to the depersonalization / derealization factor of the DES, when included with the other background and attachment variables. It was dropped from the regression equation before attaining significance ($t = .26$, $df = 1,44$, $p > .10$).

In the preceding regression analyses, the relative contributions of (i) attachment measures and background variables, and (ii) social support strategies and background variables to dissociative

experiences were assessed. They show that attachment and social support variables generally make a non-significant contribution to the variance in DES scores.

In the following regression analyses, background variables of mood and negative life events were dropped and instead the relative contributions of attachment measures and social support measures to dissociative experiences were compared.

Overall DES score Two of the attachment measures significantly contributed to the DES score: fearful attachment and preoccupied attachment both entered the equation ($t = 2.59$, $df = 1,44$, $p = .01$, and $t = 2.54$, $df = 1,44$, $p = .01$, respectively).

It was hypothesized that the isolation factor of the DES would be associated with avoidant attachment and social support. When the adult attachment and social support variables were entered, three variables made significant contributions to the equation. These were secure attachment ($t = 3.33$, $df = 1,44$, $p < .005$), preoccupied social support ($t = 1.98$, $df = 1,44$, $p = .05$) and preoccupied attachment ($t = 1.93$, $df = 1,44$, $p < .10$). Avoidant attachment was dropped from the equation before reaching significance ($t = 0.35$, $df = 1,44$, $p > .10$), as was avoidant social support ($t = .20$, $df = 1,44$, $p > .10$).

The absorption factor of the DES, it was hypothesized, would be associated with preoccupied forms of attachment and social support. While preoccupied forms of support seeking contributed significantly to the equation ($t = 2.87$, $df = 1,44$, $p < .01$), preoccupied attachment was dropped from the equation before reaching significance ($t = .85$, $df = 1,44$, $p > .10$).

Finally, it was hypothesized that depersonalization and derealization would be associated with fearful attachment and fearful social support strategies. With these variables entered into the equation, no significant results emerged. Both fearful attachment and fearful strategies for using social support were dropped from the equation before reaching significance (fearful attachment: $t = .79$, $df = 1,44$, $p > .10$; fearful social support strategies: $t = 1.20$, $df = 1,44$, $p > .10$). Once again,

therefore, the hypothesis that fearful attachment makes a substantial contribution to dissociation characterized by depersonalization and derealization is not supported.

Summary

Early and current attachment

In this thesis, secure adult attachment has been shown to be significantly correlated with high levels of early care and low levels of early over-protection, as hypothesized. Conversely, fearful attachment was found to be correlated with low levels of care and high levels of over-protection. However, no relationship was observed between avoidant attachment and either low levels of care or low levels of over-protection.

Attachment and social support:

Adult attachment and the four prototype-descriptors social support measure Secure and fearful adult attachment patterns were found to be correlated with secure and fearful strategies for using social support, as hypothesized. However, significant correlations did not emerge between avoidant attachment and avoidant strategies for using social support, nor between preoccupied attachment and preoccupied strategies for seeking social support.

Adult attachment and the multi-item support measure Secure attachment was positively correlated with the "openness" factor of the multi-item support measure and negatively correlated with the "self-doubt" factor, supporting the hypothesis. Fearful attachment was shown to be significantly negatively correlated with the "openness" factor and significantly positively correlated with the "self-doubt" factor, in line with the hypothesis. However, neither avoidant attachment nor preoccupied attachment were correlated with the "openness" or the "self-doubt" factor.

Attachment and the Significant Others Scale Secure attachment was significantly positively correlated with perceived level of support and significantly negatively correlated with the size of the discrepancy between perceived and ideal support, thus supporting the hypothesis.

Endorsement of the fearful descriptor was moderately correlated with low levels of perceived support. In addition, a significant correlation obtained between endorsement of the fearful prototype and discrepancy between ideal and perceived levels of support.

Endorsement of the avoidant attachment item was negatively correlated with ideal levels of social support, as hypothesized, but was not significantly correlated with perceived support.

A significant correlation emerged between the discrepancy between perceived and ideal levels of support, and preoccupied attachment, as hypothesized.

Attachment and dissociation

Secure participants were shown to experience lower levels of dissociation than avoidants, preoccupieds or fearfuls; fearfully attached individuals experienced the greatest levels of dissociation. Both these findings are in line with the hypotheses. However, the specific relationships between avoidant attachment and isolation, preoccupied attachment and absorption, and fearful attachment and depersonalization/derealization were not observed, and thus these hypotheses are not supported.

Type I trauma patients: First, it was suggested that poor outcome following a trauma might relate to problems in seeking social support. As hypothesized, the trauma group endorsed the secure social support strategies less strongly than the remainder of the psychology group. They also endorsed the avoidant item more strongly. Differences between the groups were not found for the preoccupied or fearful social support strategies. The results therefore partially support the hypotheses.

Within the trauma group, patterns of social support seeking were similar for day-to-day upsetting events and for the traumatic event itself, suggesting a pervasive difficulty with seeking social support.

Secondly, it was hypothesized that problems in seeking social support might be expressions of underlying attachment difficulties. The trauma group did not exhibit attachment problems which were more marked than those in the psychology out-patient group. However, the trauma group, like the general psychology group, differed from the comparison group in terms of the attachment ratings, with higher ratings being accorded to the various forms of insecure attachment.

Regression analyses Generally, the regression analyses demonstrate that attachment and social support variables make only a small contribution to dissociation. Mood and reported negative life events appear to make a more substantial contribution.

To summarize, adulthood secure attachment appears to act as a protective factor against dissociation and seems to form the basis for being able to make appropriate use of social support. Fearful attachment by contrast seems to be a vulnerability factor for dissociation and appears to mitigate against making good use of social support.

In this study, avoidant and preoccupied attachment do not appear to give rise to specific types of dissociative experience. Rather, avoidant attachment is largely uncorrelated with dissociative experiences, whilst preoccupied attachment is associated with a range of dissociative experiences, rather than the single factor of absorption, as hypothesized. Both avoidant and preoccupied attachment seem to be related to moderate levels of difficulty in making use of social support.

Discussion

In the first section of the discussion, the results will be discussed. In the latter section, the methodological shortcomings of the study will be addressed.

Implications of findings

Overview The results support the broad hypothesis that attachment is related both to dissociation and to levels of social support. This is the case both when attachment is measured retrospectively and when it is measured in relation to current relationships. The strongest findings were obtained in relation to secure attachment (as a protective factor) and fearful attachment (as a vulnerability factor). Securely attached individuals benefit from positive working models of self and others, whilst fearfully attached individuals are encumbered with negative working models of self and others. The effects of each of these combinations might be expected to be stronger than the effects of a positive-negative combination. In the positive-negative combinations (avoidant and preoccupied), at least one positive working model exists which might moderate the effects of trauma and day-to-day distress, whereas in the negative-negative combination, working models do not suggest any kind of strategy for managing negative affect: Liotti's (1992) "insoluble paradox" springs to mind in this respect. For securely attached individuals, the existence of dual positive working models suggests two sets of strategies for managing affect, i.e. social support and personal exploration of distressing events, resulting in more complete processing of material which has given rise to negative affect.

Whilst correlational analysis of attachment ratings against social support and dissociation variables is generally strong, the results of the regression analyses suggest that attachment is one of a number of variables contributing to dissociation and social support, and that its contribution is relatively small. However, from a clinical perspective, internal working models are amenable to some

revision, whilst certain other variables, such as sex and age, are of course impervious to change as a result of therapy.

Relationship between current and early attachment It was hypothesized that early attachment, as measured by the Parental Bonding Instrument, would be correlated with current attachment as measured by the Bartholemew and Horowitz instrument. The results of this study support the hypothesis that early level of care and over-protection to either parent predicts current secure and fearful attachment, and lends support to the hypothesis that in these groups attachment is a fairly stable construct.

However, current avoidant attachment was not clearly related to early attachment as measured by the Parental Bonding Instrument. One explanation for this is that the avoidant cognitive style centres around minimizing distressing cognitions and excluding them from conscious awareness (Bowlby, 1980; Erdelyi, 1974). Consequently, avoidant individuals may tend to report idealized accounts of their relationships with their parents. In the Adult Attachment Interview, idealized accounts of early life which cannot be substantiated by means of specific positive memories are taken as being indicative of an avoidant style (Main & Goldwyn, 1985).

A second hypothesis is that the existence of one positive working model in childhood allows for subsequent revision of the remaining negative model in adulthood. One context in which such models may be revised is that of an intimate relationship. A partner who is able to respond to distress in an avoidant individual by encouraging some expression of negative affect may demonstrate to the avoidant person that "at least one other can be positive", thereby opening the door to a revision of the general working model of others.

The hypothesis that current preoccupation would be related to high levels of over-protection and high levels of care was partially supported. A relationship between over-protection was observed with regard to both parents. However, a preoccupied current attachment style was associated with *low* levels of care. Theoretically, this should result in negative models of others; these would be

expected to give rise to strategies based on avoidance of social support. This finding may reflect the way in which current attachment was measured. Hazan and Shaver's original measure of attachment asked respondents to choose just one of the three available prototypes to describe their relationships with others. This led to a categorical allocation of attachment style. The Bartholemew and Horowitz measure requires respondents to rate the degree to which each prototype reflects their own relationship experiences on a seven-point Likert scale. Therefore, respondents are able to rate two attachment patterns quite highly. Post hoc analysis of the relationship between preoccupied and fearful attachment showed that endorsement of the two patterns was significantly correlated ($r = .36$, $p < .05$). This suggests that the distinction between preoccupied and fearful attachment, at least in this sample, may be somewhat blurred by the way in which attachment was measured. Bartholemew and Horowitz, in their analysis of attachment patterns using a slightly larger sample ($N = 77$), found a non-significant correlation between these two patterns, suggesting that they may in fact be independent to some extent. More research appears to be required to determine the relationship between these attachment patterns.

Adult attachment and social support The second set of hypotheses related to the relationship between the Bartholemew and Horowitz measure of adult attachment and the two attachment-based measures of social support devised for this thesis.

The first attachment based measure of support was in a four-item format which closely reflected the Bartholemew and Horowitz measure. Secure and fearful patterns of attachment were found to be correlated with secure and fearful patterns of social support seeking, as hypothesized. However, significant relationships again failed to emerge between avoidant and preoccupied attachment, and avoidant and preoccupied strategies for seeking social support.

This raises the question of how attachment is best measured. The Parental Bonding Instrument measures the inputs to working models, i.e. the circumstances which are presumed to give rise to positive or negative models of self and others. The Bartholemew and Horowitz measure claims to

assess the outputs of these models, i.e. the behaviours which such models are presumed to generate. However, ethological approaches to attachment (Hinde, 1982) view the attachment system as being activated only in particular circumstances, specifically, emotionally distressing events. The Bartholemew and Horowitz measure taps more general attitudes to emotional relationships, whereas the social support measures devised for this thesis attempt to tap attitudes to seeking support in the aftermath of distressing events (the "secure base" phenomenon). Whether attachment is best measured in relation to general attitudes towards relationships or in relation to the specific ways in which relationships are made use of following distressing events is a potential area for future research.

The multi-item measure of support essentially replicated the results obtained with the Likert scale version; as hypothesized, secure attachment was positively correlated with "openness" and negatively correlated with "self doubt", whereas the relationships were reversed with respect to fearful attachment. Avoidant and preoccupied patterns, as assessed by the Bartholemew and Horowitz measure, were not significantly related to the multi-item factors.

The emergence of two factors in this measure lends support to the concept of the existence of two working internal models. The "openness" factor seems to reflect attitudes to seeking support from others, whilst the "self-doubt" factor relates to concerns about negative evaluation by others. This reflects the findings of a number of other multi-item measures (Feeney, 1994; Griffin & Bartholemew, 1994; Strahan, 1991), in this case based on the Hazan and Shaver three-category measure (Hazan & Shaver, 1987), which also give rise to two factors, termed by Feeney and Noller (1996) "comfort with closeness" and "anxiety over relationships".

Another source of support for a four-category model of attachment is the relationship between endorsement of the fearful attachment descriptor and many of the other variables, including dissociation, social support and early attachment experiences. Had a three category measure been employed, those participants who in this thesis strongly endorsed the fearful attachment descriptor are likely to have endorsed one of the remaining forms of insecure attachment rather than the secure

attachment descriptor, and thus the relationships between fearful attachment and dissociation, and between fearful attachment and social support, would have been obscured.

Dissociation With regard to dissociation, the following hypotheses were advanced:

Secure participants would experience lower levels of dissociation than avoidants, preoccupieds or fearfuls; the results support the hypothesis. Why might securely attached individuals experience low levels of dissociation? In the introduction, a model of dissociation was discussed in which dissociation was seen as a primitive defense, protecting against otherwise unbearable negative affect. This was seen to arise frequently in abused or neglected children, where failure to master the psychodevelopmental stage of integration of various ego states resulted in a low threshold for dissociative experiences. Integration of ego states was seen to be linked to the caregiver's ability to attune to the infant's cues (Schore, 1994), suggesting that securely attached children initially learn to integrate various ego states by reflecting on them in the presence and with the assistance of their caregivers. This capacity to reflect on intrapsychic processes has been termed "metacognition" and is discussed from an attachment perspective by Main (1991). The ability to integrate diverse experiences along with the ego-states to which they give rise into a coherent narrative may therefore be more pronounced in securely attached individuals. This gives rise to a high threshold for dissociative experience. In addition to the securely attached adult's advantage in terms of capacity for integration of ego-states, the securely attached adult is also comfortable seeking out emotional support. It is in these settings that individuals can "tell the story" of distressing events, and research suggests that this in itself can result in reduced pathology (Pennebaker, 1993; Wigren, 1994).

Fearfully attached individuals, it was hypothesized, would show the most severe symptomatology, including depersonalization and derealization. Fearful attachment was indeed related to all forms of dissociative experience, and to the overall DES score, and thus the hypothesis is again supported. The same model discussed in relation to securely attached individuals can be applied in reverse to

fearfully attached. Unresponsive or abusive caregivers result in problems in the integration of various ego-states, and a correspondingly low threshold for dissociation, particularly in the context of repeated trauma. This may then develop into a cognitive style for managing a wide range of negative affect.

It was hypothesized that avoidant attachment would be associated with isolation as measured by the DES. However, avoidant attachment was not significantly correlated with any of the dissociation factors. One explanation for this finding is that the self-reports of avoidant individuals are unreliable: Bowlby (1980) suggests that an avoidant cognitive style is associated with strategies for managing negative affect based upon minimization of awareness. Therefore, the self-reports of avoidant individuals may not reflect their experience as closely as do self-reports of other groups. A difficulty with this interpretation is that if avoidance is associated with denial of distress, a negative correlation between dissociation and endorsement of avoidant attachment would be expected, rather than the very small correlations observed in this thesis.

Preoccupied attachment was found to be correlated with absorption, as hypothesized, but also with isolation and general memory disturbance. This again contradicts the hypothesis, especially in terms of the relationship between preoccupied attachment and isolation. Isolation, it will be recalled, is hypothesized to be the preserve of the avoidantly attached. The results of this thesis suggest that both preoccupied and fearful attachment are risk factors for dissociative experiences of all kinds. One explanation for this is that dissociation is correlated not so much with particular attachment patterns, but with degree of insecurity of attachment. It should also be noted that endorsement of preoccupied and fearful attachment was significantly correlated, suggesting that these patterns may not be completely independent of each other.

In summary, the results suggest that degree of security of attachment is related to dissociation, but that particular attachment patterns are not related to particular dissociative styles. Beere (1995) has suggested that the type of dissociative experience is related to characteristics of the trauma rather than of the individual. It is quite likely that dissociative experience is a function of both individual vulnerability and characteristics of the trauma, but the relationship between the two is not well understood at present.

Social support With regard to social support, the following hypotheses were made:

Secure individuals would perceive higher levels of social support than the remaining groups, and would have lower discrepancy scores as measured by the Significant Others Scale. The results support the hypothesis.

Avoidant and fearful individuals were hypothesized to make less use of social support than secures. Their estimates of perceived and ideal social support, as measured by the Significant Others Scale, would therefore be lower than those of the secure group. Avoidant attachment was indeed negatively correlated with ideal level of support, but was not related to perceived level of support. Fearful attachment was not significantly correlated with low levels of perceived support, and was unrelated to ideal support. These findings support the hypothesis that avoidant attachment is associated with lower levels of social support, but do not support the same hypothesis in relation to fearful attachment.

Preoccupied individuals were hypothesized to seek out more social support than secures and to feel that the support which they do have is somewhat inadequate. These individuals were therefore hypothesized to report high levels of perceived social support. However, their over-reliance on others suggests that they should wish for levels of support even greater than that which they receive; consequently, they were expected to score higher than the other groups in terms of the discrepancy between perceived and ideal support. Significant correlations did not emerge with respect to

perceived or ideal levels of support, but preoccupied attachment was related to higher levels of discrepancy between perceived and ideal support levels. Thus, the hypothesis is partly confirmed.

The above findings suggest that attachment is related to perceptions of adequacy of social support. There are, however, a number of ways of explaining this.

Attachment theorists would argue that internal working models of early caregivers act as templates, to some degree, for subsequent interactions. Attachment pattern therefore generates social behaviour and perceptions of support.

Correlational analyses do not allow us to infer causality, so it may be that measures of attachment and measures of social support are merely tapping an underlying variable of "general sociability" or "interpersonal skill".

Correlations between the Parental Bonding Instrument and summary scores derived from the Significant Others Scale were generally in the expected directions, as reported in the Results section. This lends some support to the theory that early attachment experiences generate models which guide future interactions.

Adaptation to trauma Hypotheses regarding traumatized patients are were follows:

Participants who are in treatment for a Type I trauma were expected to score lower than their non-traumatized psychology patient counterparts for support seeking strategies based on secure attachment, and higher on support seeking strategies based on fearful attachment. Despite the small number of traumatized participants, a statistical analysis was attempted. Adaptation following trauma ought to be highly associated with attachment pattern, given that one of the functions of the attachment system is to provide a sense of security through interaction with significant others. Given the theoretical grounds for such a relationship, it was considered to be of interest to examine the data statistically. The results indicate that the traumatized patients endorsed secure support strategies less strongly than their non-traumatized counterparts, and avoidant attachment more strongly. No differences were observed with regard to fearful support strategies. No differences

emerged in the measures of support seeking for day-to-day distressing events and support seeking for the trauma event in particular, suggesting that traumatized patients exhibit problems in seeking support generally, rather than problems in seeking support specifically in relation to the traumatic event. However, it must be emphasized that the small number of traumatized participants means that extreme caution must be taken when reaching conclusions about the results. However, if this group is representative of the wider population of trauma victims seeking professional help, it suggests that trauma patients typically experience difficulty in seeking emotional support not only in relation to the traumatic event but also in relation to day-to-day stressors. Given the protective nature of social support following trauma (Joseph, 1999), it is possible that health services see a subset of trauma victims who are unable to access their own informal networks for social support.

It was also hypothesized that if the social support measures do indeed tap one aspect of attachment pattern, the Type I trauma patients would score low on all measures of secure attachment and high on all measures of insecure attachment, as compared to their non-traumatized psychology counterparts. This relationship was not observed. However, the attachment measures did distinguish between the psychology and comparison groups, suggesting that attachment may have a broad role to play in all forms of psychological problems.

It must be emphasized that the trauma group consisted of just five patients, so these results have to be interpreted with caution. Further research is required to examine the relationship between attachment and outcome following a traumatic event.

Between-group differences

As predicted, BDI II scores were higher in the clinical group, presumably because the clinical group consists of relatively distressed people referred to psychology services. However, no difference emerged between the groups in terms of overall levels of dissociation. This finding cannot easily be interpreted. The results suggest that, of the background variables, BDI score contributes the greatest amount of variance to DES score. This finding also goes against much of the research into

dissociation, which suggests that it is indeed greater in clinical than in non-clinical populations (Bernstein & Putnam, 1986).

As for attachment, it was hypothesized that the non-clinical group would endorse the secure attachment descriptions more strongly than the clinical group. Conversely, the clinical group was expected to endorse all three insecure forms of attachment more strongly than the non-clinical group. The findings support this, and suggest that those receiving treatment for psychological problems experience perceived or real deficits in their interpersonal relations.

In terms of social support, the non-clinical group was expected to enjoy a greater level of social support than the clinical group. Furthermore, discrepancies between perceived and ideal support levels were hypothesized to be less marked in the non-clinical group. Both groups expressed similar levels of desired social support, but the psychology group indicated lower levels of perceived support, and therefore higher levels of discrepancy, than the comparison group. Again, there are cause-and-effect problems in reaching conclusions on the basis of this data. The occurrence of, for example, depression may result in social withdrawal both on the part of the patient and on the part of the patient's social supports, particularly if the depression is relatively severe or enduring. Alternatively, lack of adequate social support may contribute towards vulnerability to depression. As has been noted earlier, the Parental Bonding Instrument was found to be correlated with current perceptions of social support. Therefore, it can be tentatively suggested that problems in social support predate psychological treatment, although the same caveats about the retrospective nature of the Parental Bonding Instrument must be borne in mind.

Methodological shortcomings

Selection and recruitment Biases in both the patient group and the comparison group were likely to have arisen because of selection and recruitment of participants. As stated earlier, patients were recruited by therapists. During the course of the study, it became clear that therapists were reluctant to administer the packs to each of their patients because of the intrusive nature of some of the questionnaires. Therefore it is likely that patients who were invited to participate may have been

towards the less severe end of the spectrum of psychological distress. However, the average BDI score in the patient group was 20, with a range of 1 to 39. This indicates that in terms of mood patients spanned the spectrum from non-depressed to severe depressed, with most experiencing moderate levels of depression.

A second difficulty in interpreting results from the patient group is that no account was taken of the patient's stage in treatment. Stage in treatment would be expected to be correlated with severity of problems, thus resulting in variance in the BDI and DES scores. Furthermore, treatment may have brought about changes in the patient's use of social support, either indirectly or directly. Interpersonal Therapy (Klerman, Weissman, Rounsaville and Chevron, 1984), for example, specifically addresses attitudes to social support, whilst other forms of therapy might be expected to result in changes in the patient's relationship to his / her social network. The effect of such changes would presumably be reflected in the measures of adult attachment and social support.

It had been intended to recruit a group consisting of traumatized patients. In the event, just five traumatized patients were recruited: many other traumatized patients were either participating in another research project or were known to have experienced abuse or neglect as children, and for these reasons could not be included in the present study. Given the very low number of trauma patients, any results from this group must be treated with considerable caution.

Again with respect to the trauma patients, details were not recorded as to the nature of the traumatic event each had experienced. Interpersonal events such as rape may be expected to have effects on an individual's beliefs about the nature of human beings (Gidycz & Koss, 1991), whilst impersonal events such as losing control of one's car would be expected to have no particular consequences for interpersonal beliefs. A larger trauma group may have made possible an analysis of type of trauma on interpersonal beliefs, and would have allowed the other findings to be treated with more confidence.

The comparison group (N = 25) in fact consists of four groups, each of which would be expected to show some bias. The four groups were psychology undergraduates (N = 7), acquaintances of the

researcher (N = 6), attendees at a motorcycling event (N = 5) and adult students of two classical guitar teachers (N = 6). The comparison group was somewhat younger than the psychology group and had also spent significantly more years in education after the age of sixteen. Research suggests that both age and level of education are inversely correlated with dissociation (Shalev, 1996), so the effects of these two factors may have cancelled each other out to some extent. However, it would clearly have been preferable to have compared groups which did not differ significantly in terms of age or level of education.

Statistical issues The overall sample size is somewhat small. Much of the research into attachment and dissociation employs sample sizes running into several hundred participants, but this was not possible in the present study due to time constraints. (Many of these studies, however, have employed undergraduate populations, which are of course relatively young, relatively middle class and relatively intelligent. These variables may be related to attachment. An advantage of the present study is that it attempted to focus on attachment, dissociation and social support in both a clinical and non-clinical population.)

The size of the sample in this study gives sufficient power to detect large effect sizes at 0.80 for simple correlations and ANOVA tests with two groups (Cohen, 1992). In order to test for small to medium effect sizes at 0.80 it would be necessary to increase the sample size to several hundred, a proposition which was not feasible for the purposes of this study.

A particular note of caution must be made with respect to the trauma group, which consisted of just five participants. The theoretical relationship between adaptation to trauma and use of social support is of interest from an attachment perspective, and in that spirit a statistical analysis was conducted. However, the quantatitive data which relate to the trauma group cannot be regarded as robust. Further research might be conducted in this area.

Much of the statistical analysis relies on the use of correlational statistics, which make it possible to detect associations between variables but do not shed light on the nature of the correlation. The

relationships between the Parental Bonding Instrument and the measure of current attachment can be interpreted as evidence that early attachment models form the basis of subsequent attachment. On the other hand, the retrospective nature of the Parental Bonding Instrument means that relationships between current and past attachment may be spurious. By using a measure of childhood attachment experiences, it is possible to reach tentative conclusions as to whether, for example, attachment problems predate social support deficits. However, retrospective measures remain problematic. Ideally, prospective methods would be employed to determine the effects of early attachment on current functioning. Again, such a method was clearly unfeasible for the present thesis.

Clinical implications

If, as is suggested, attachment is related to dissociation, and perhaps even a contributing factor to dissociation, is there anything which clinicians can do to intervene?

One way of viewing the process of therapy is that it involves in part overcoming the stumbling blocks which patients experience in the process of telling their narrative. Therapists need to be aware, therefore, of the possibility that their clients may be reluctant to disclose personal information because of the influence of working models. Patients may believe their therapists to be untrustworthy, or may have little confidence in their own ability to manage their emotions, even with the assistance of a therapist. Psychodynamic therapists have long stressed the importance of demonstrating reliability even in the finest details of therapy, for example, in adhering fairly strictly to the fifty minute hour (Brown & Pedder, 1996). From an attachment perspective, this attention to detail may lead the patient to have increasing confidence in the essential trustworthiness of the therapist.

Clinicians may also be able to intervene at the social level, by encouraging patients to learn to confide in partners and close friends. Clinicians may, for example, assist their clients to draw up

hierarchies of friends based on the trust they have in each. Many techniques – behavioural, interpersonal therapy, and family/systems therapy – have already been devised for this purpose.

The above interventions may lead to revisions of working models of others. Negative working models of self may be revised by introducing graded exposure to affect-laden imagery, or by encouraging dissociating patients to maintain awareness of stimuli which are normally excluded. Graded exposure to imagery is an established technique, and is usually based on an information-processing paradigm, but equally change may occur in the individual's self-schema as a result of successful experiences in managing affect which was previously believed to be unmanageable.

Most of the interventions described are already used by clinicians, but are not specifically conceptualized in attachment terms.

Future research

A number of questions are raised by this thesis which might be addressed in future research.

Measurement of attachment: the internal working models of attachment must be measured indirectly, with reference to the inputs and outputs with which each attachment pattern is associated. As has been mentioned, some measures (for example, the Parental Bonding Instrument) assess inputs, i.e. tone of voice of parents, parents' attitudes towards their child's independence, whilst other measures, particularly measures of adult attachment, tap outputs, i.e. the respondent's reports of behaviour and attitudes towards social relationships.

A problem with many measures of attachment is that they appear to tap general relationship attitudes rather than particular behaviours which are derived from attachment theory. Central to attachment theory is the "secure base" concept, but this is rarely addressed by attachment measures. It will be recalled that the attachment system is thought to be activated in only a limited set of circumstances, and it is in these circumstances that the various attachment patterns are perhaps most likely to emerge.

Preoccupied and fearful attachment In this thesis a strong correlation emerged between preoccupied and fearful attachment. Bartholemew and Horowitz, in their research (Bartholemew & Horowitz , 1991), found weak positive correlations between the adjacent quadrants of their model. It is obviously important to determine the extent to which preoccupied and fearful attachment are correlated: if further research suggests a strong correlation between the two patterns, it may suggest that they cannot usefully be separated into distinct patterns. If on the other hand further studies demonstrate only a weak correlation between the two patterns, a four category model of attachment will appear more convincing.

Determinants of dissociative experiences Finally, it has been argued that dissociation can take a number of forms. The relative contributions of individual and traumatic event variables might be studied by using regression analysis to determine the relative contribution of such variables to dissociation.

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APPENDICES

Appendix 1

Parental Bonding Instrument:

The Parental Bonding Instrument (Parker, Tupling & Brown, 1979: see over) is a twenty five item self report measure which elicits memories of parental care in the first sixteen years of life. Separate measures are completed for mother and father. Parker *et al.s* research suggests a two-factor solution. They term these factors "care" and "over-protection".

It has acceptable test-retest reliability over a three week period (Pearson correlation coefficient of 0.761, $p<0.001$ for the "care" scale; Pearson correlation coefficient of 0.628, $p<0.001$ for the "over-protection" scale); and good validity as assessed by the relationship between scores on the PBI and participants' responses in semi-structured interviews to questions about the quality of their relationships with parents in the first sixteen years (Pearson correlation coefficient of 0.851, $p<0.001$ for the "care" scale; Pearson correlation coefficient of 0.688, $p<0.001$ for the "over-protection" scale).

Split-half reliability is reported to be high, with a Pearson correlation coefficient of 0.879 ($p<0.001$).

Parental Bonding Instrument: (Parker, Tupling and Brown, 1979)

This questionnaire lists various attitudes and behaviours of parents. As you remember your [redacted]r/Father in your first 16 years would you place a tick in the most appropriate brackets next to each question.

	Very like	Moderately like	Moderately unlike	Very unlike
Spoke to me with a warm and friendly voice				
Did not help me as much as I needed				
Let me do those things I like doing				
Seemed emotionally cold to me				
Appeared to understand my problems and worries				
Was affectionate to me				
Liked me to make my own decisions				
Did not want me to grow up				
Tried to control everything I did				
Invaded my privacy				
Enjoyed talking things over with me				
Frequently smiled at me				
Tended to baby me				
Did not seem to understand what I needed or wanted				
Let me decide things for myself				
Made me feel I wasn't wanted				
Could make me feel better when I was upset				
Did not talk with me very much				
Tried to make me dependent on her/him				
Felt I could not look after myself unless she/he was around				
Gave me as much freedom as I wanted				
Let me go out as often as I wanted				
Was overprotective of me				
Did not praise me				
Let me dress in any way I pleased				

Appendix 2

Bartholemew and Horowitz (1991) measure of current attachment:

This self-report measure (see over) consists of four descriptions of relationship styles. Each description corresponds to one of the four attachment styles. Respondents are asked to indicate the degree to which each description accords with their own style of relating. A seven point Likert scale is provided.

The authors have demonstrated acceptable validity by comparing responses to their measure with respondents' responses to a semi-structured attachment interview. Discriminant analysis showed that the various interview ratings were significantly related to the four attachment groups, correctly classifying 92 per cent of the sample. The written measure correctly classified 86 per cent of those whom the semi-structured interview had classified as secure; 94 per cent of those defined as fearful by the semi-structured interview; and 100 per cent of both the dismissing and preoccupied groups.

Measure of Attachment: (Bartholemew and Horowitz, 1991)

Instructions: *Below are four descriptions of ways in which a person might relate to others. After each description is a scale from 1 to 7. Please circle the number which denotes the extent to which each description corresponds to you. For example, if the first description is somewhat close to your way of relating, you might circle 5. If it is very much unlike you, you would circle 1.*

- It is relatively easy for me to become emotionally close to others. I am comfortable depending on others and having others depend on me. I don't worry about being alone or having others not accept me.

1-------2-------3-------4-------5-------6-------7
Not at all like me *Very much like me*

- I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

1-------2-------3-------4-------5-------6-------7
Not at all like me *Very much like me*

- I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

1-------2-------3-------4-------5-------6-------7
Not at all like me *Very much like me*

- I am somewhat uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely or to depend on them. I sometimes worry that I will be hurt if I allow myself to become too close to others.

1-------2-------3-------4-------5-------6-------7
Not at all like me *Very much like me*

Appendix 3

(a) Attachment based measure of social support
(b) Attachment based measure of social support following a traumatic event

These measures were devised for the present study by the author. In terms of format, they are based on the Bartholemew and Horowitz measure. However, the Bartholemew and Horowitz measure assesses general aspects of close emotional relationships, whereas this measure seeks to examine the secure base effect as it is manifested in social support strategies.

Test-retest reliability was not assessed.

Validity was assessed by examining the correlation coefficients between the attachment based measures of social support and (i) the Parental Bonding Instrument, and (ii) the Bartholemew and Horowitz measure. These results are reported in Appendices 12 and 13.

Attachment-based Measure of Social Support

Instructions: *Below are four descriptions of ways in which you might relate to others following an upsetting event. After each description is a scale from 1 to 7. Please circle the number which denotes the extent to which each description corresponds to you. For example, if the first description is somewhat close to your way of relating, you would circle 5 or 6. If it is very much unlike you, you would circle 1.*

- After an upsetting event I prefer to deal with it myself. I would not want to discuss it with friends, and I would find it upsetting if friends talked about it to me.

1-------2-------3-------4-------5-------6-------7
Not at all like me — *Very much like me*

- After an upsetting event it would be relatively easy for me to confide in friends. I am comfortable relying on friends for support from time to time. I don't worry that they will think worse of me if I discuss personal issues.

1-------2-------3-------4-------5-------6-------7
Not at all like me — *Very much like me*

- After an upsetting event I would like to feel able to talk to my friends about it, but at the same time I would find it difficult to trust them. I would not want to open up completely to them, but it would perhaps be better for me if I could.

1-------2-------3-------4-------5-------6-------7
Not at all like me — *Very much like me*

- After an upsetting event I would definitely talk to friends about it. Talking about the event would make me feel better. However, my friends may not be able to provide as much support as I would ideally like.

1-------2-------3-------4-------5-------6-------7
Not at all like me — *Very much like me*

Attachment-based Measure of Social Support (traumatic event)

Instructions: *Below are four descriptions of ways in which you may have related to others following your traumatic event. After each description is a scale from 1 to 7. Please circle the number which denotes the extent to which each description corresponds to you. For example, if the first description is somewhat close to your way of relating, you would circle 5 or 6. If it is very much unlike you, you would circle 1.*

- After the traumatic event I tried to deal with my emotions myself. I did not want to discuss it with friends, and I would have found it upsetting if friends had talked about it to me.

1-------2-------3-------4-------5-------6-------7
Not at all like me — *Very much like me*

- After the traumatic event it was relatively easy for me to confide in friends. I was comfortable relying on friends for support. I didn't worry that they would think worse of me if I discussed the impact the event had on me.

1-------2-------3-------4-------5-------6-------7
Not at all like me — *Very much like me*

- After the traumatic event I would have liked to feel able to talk to my friends about it, but at the same time I found it difficult to trust them. I did not want to open up completely to them, but it would have perhaps been better for me if I had.

1-------2-------3-------4-------5-------6-------7
Not at all like me — *Very much like me*

- After the traumatic event I talked to friends about it. Talking about the event made me feel better. However, my friends were not be able to provide as much support as I would ideally have liked.

1-------2-------3-------4-------5-------6-------7
Not at all like me — *Very much like me*

Appendix 4

Attachment based measure of social support: multi-item version

This measure was devised by the author by taking descriptions from the preceding measure and breaking them down into their constituent parts. This gave rise to a twelve item measure.

Test-retest reliability was not established.

Factor analysis (see Appendix 11) suggested two factors, termed "openness" and "self-doubt". Items 1, 2, 4, 5, 6, 8, 9, 10 and 11 loaded on the "openness" factor, with the remaining items loading on the "self-doubt" factor.

Guttman split-half reliability for the "openness" factor was .83, whilst for the "self-doubt" factor it was .60.

The scale was validated by correlating the factors with the Bartholemew and Horowitz measure and with the Parental Bonding Instrument (see Appendix 13).

Attachment-based Measure of Social Support

Instructions: *Please tick the box which is closest to the way you feel about the following statements.*

	Completely agree	Somewhat agree	Somewhat disagree	Completely disagree	Don't know
After an upsetting event it would be relatively easy for me to confide in close friends.					
I am comfortable relying on close friends for support from time to time					
I worry that close friends would dislike me in some way if I confided in them after an upsetting event					
I prefer to deal with my emotions by myself					
I would not like my friends to remind me of an upsetting event by talking to me about it					
Close friends would not be able to provide as much support as I would like after an upsetting event.					
I get over upsets quite quickly.					
I find it difficult to trust friends with my emotions					
Talking to others helps me make sense of an emotionally difficult time					
Talking to others is re-assuring					
I would like to be more open with my friends					
I doubt my ability to deal with strong emotions by myself					

Appendix 5

Dissociative Experiences Scale

The Dissociative Experiences Scale (Bernstein & Putnam, 1986) has been shown to exhibit good validity and reliability. Test-retest reliability over a six month period is reported at 0.84 ($p<.0001$). Reliability coefficients between the items are reported to range between .19 and .75, with the median coefficient being .60.

Validity was determined by comparing dissociation scores between participants classified on the basis of diagnosis. Dissociation scores were significantly higher in those groups which are characterized by dissociative experiences (sufferers of schizophrenia, posttraumatic stress disorder and multiple personality disorder), suggesting that the DES is a valid measure of dissociation.

DES

Eve Bernstein Carlson, Ph. D. Frank W. Putnam, M. D.

DIRECTIONS

This questionnaire consists of twenty-eight questions about experiences that you may have in your daily life. We are interested in how often you have these experiences. It is important, however, that your answers show how often these experiences happen to you when you **are not** under the influence of alcohol or drugs.

To answer the questions, please determine to what degree the experience described in the question applies to you and circle the number to show what percentage of the time you have the experience.

EXAMPLE:

0% 10 20 30 40 50 60 70 80 90 100%
(never) (always)

Date _____

1. Some people have the experience of driving or riding in a car or bus or subway and suddenly realizing that they don't remember what has happened during all or part of the trip. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

2. Some people find that sometimes they are listening to someone talk and they suddenly realize that they did not hear part or all of what was said. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

3. Some people have the experience of finding themselves in a place and having no idea how they got there. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

4. Some people have the experience of finding themselves dressed in clothes that they don't remember putting on. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

5. Some people have the experience of finding new things among their belongings that they do not remember buying. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

6. Some people sometimes find that they are approached by people that they do not know who call them by another name or insist that they have met them before. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

7. Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

8. Some people are told that they sometimes do not recognize friends or family members Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

10. Some people have the experience of being accused of lying when they do not think that they have lied. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

11. Some people have the experience of looking in a mirror and not recognizing themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

12. Some people have the experience of feeling that other people, objects, and the world around them are not real. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

13. Some people have the experience of feeling that their body does not seem to belong to them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

17. Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

18. Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

19. Some people find that they sometimes are able to ignore pain. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

20. Some people find that that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

21. Some people sometimes find that when they are alone they talk out loud to themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations, etc.). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that this (for example, not knowing whether they have just mailed a letter or have just thought about mailing it). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

25. Some people find evidence that they have done things that they do not remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

26. Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

28. Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

Appendix 6

Significant Others Scale

The Significant Others' Scale (Power Champion & Aris, 1988) is a self-report measure of social support. It allows the respondent to identify up to seven people who are important sources of support. For each person, the respondent rates perceived and ideal dimensions of support on a seven point scale. Four dimensions of support are rated for each of the respondent's significant others.

Acceptable test-retest reliability has been demonstrated by the authors, with correlations of the four summary support scores ranging between 0.73 and 0.83 over a six month time period.

SIGNIFICANT OTHERS SCALE (B)

Name: .....

Date: ..... **Record Number:** .....

Instructions

Please list below up to seven people who may be important in the individual's life. Typical relationships include partner, mother, father, child, sibling, close friends, plus keyworker. For each person please circle a number from 1 to 7 to show how well he or she provides the type of help that is listed.

The second part of each question asks you to rate how individuals would like things to be if they were exactly as they hoped for. As before, please put a circle around one number between 1 and 7 to show what the rating is.

Person 1 –	*Never*			*Sometimes*			*Always*
1 a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty? ..	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3 a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4 a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
Person 2 –							
1 a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty? ..	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3 a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4 a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
Person 3 –							
1 a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3 a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4 a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7

PLEASE CIRCLE ONE NUMBER ONLY FOR EACH QUESTION

	Never			Sometimes			Always
Person 4 –							
1 a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3 a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4 a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
Person 5 –							
1 a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3 a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4 a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
Person 6 –							
1 a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3 a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4 a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
Person 7 –							
1 a) Can you trust, talk to frankly and share your feelings with this person?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
2 a) Can you lean on and turn to this person in times of difficulty?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
3 a) Does he/she give you practical help?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7
4 a) Can you spend time with him/her socially?	1	2	3	4	5	6	7
b) What rating would your ideal be?	1	2	3	4	5	6	7

PLEASE CIRCLE ONE NUMBER ONLY FOR EACH QUESTION

Power and Champion, 1988. From 'The development of a measure of social support: The Significant Others (SOS) Scale'. *British Journal of Clinical Psychology*, 27, 349–58. Reproduced with the kind permission of the authors.

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Appendix 7

Beck Depression Inventory

The Beck Depression Inventory (Beck, Steer & Brown, 1996) is a measure of mood, frequently used in research and clinical work. Reliability of the updated version, the BDI-II, is high, with a co-efficient alpha of 0.92. One reported improvement of the BDI II over its predecessor is that it exhibits a more normal distribution of values. It is also sensitive to both poles of various depression-sensitive behavioural dimensions where its predecessor was sensitive to only one. For example, the revised BDI groups together pairs of alternative statements such as "I have no appetite at all" – "I crave food all the time", and "I sleep a lot more than usual" – "I sleep a lot less than usual".

Test-retest reliability has not been reported.

BDI®-II

Date:

me: _____ Marital Status: _____ Age: _____ Sex: _____

cupation: _____ Education: _____

structions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and n pick out the **one statement** in each group that best describes the way you have been feeling during the **past two eks, including today**. Circle the number beside the statement you have picked. If several statements in the group em to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one tement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

0 I do not feel sad.
1 I feel sad much of the time.
2 I am sad all the time.
3 I am so sad or unhappy that I can't stand it.

2. Pessimism

0 I am not discouraged about my future.
1 I feel more discouraged about my future than I used to be.
2 I do not expect things to work out for me.
3 I feel my future is hopeless and will only get worse.

3. Past Failure

0 I do not feel like a failure.
1 I have failed more than I should have.
2 As I look back, I see a lot of failures.
3 I feel I am a total failure as a person.

4. Loss of Pleasure

0 I get as much pleasure as I ever did from the things I enjoy.
1 I don't enjoy things as much as I used to.
2 I get very little pleasure from the things I used to enjoy.
3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

0 I don't feel particularly guilty.
1 I feel guilty over many things I have done or should have done.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6. Punishment Feelings

0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7. Self-Dislike

0 I feel the same about myself as ever.
1 I have lost confidence in myself.
2 I am disappointed in myself.
3 I dislike myself.

8. Self-Criticalness

0 I don't criticize or blame myself more than usual.
1 I am more critical of myself than I used to be.
2 I criticize myself for all of my faults.
3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying

0 I don't cry anymore than I used to.
1 I cry more than I used to.
2 I cry over every little thing.
3 I feel like crying, but I can't.

_____ Subtotal Page 1

Continued on Back

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1. Agitation

0 I am no more restless or wound up than usual.

1 I feel more restless or wound up than usual.

2 I am so restless or agitated that it's hard to stay still.

3 I am so restless or agitated that I have to keep moving or doing something.

2. Loss of Interest

0 I have not lost interest in other people or activities.

1 I am less interested in other people or things than before.

2 I have lost most of my interest in other people or things.

3 It's hard to get interested in anything.

3. Indecisiveness

0 I make decisions about as well as ever.

1 I find it more difficult to make decisions than usual.

2 I have much greater difficulty in making decisions than I used to.

3 I have trouble making any decisions.

4. Worthlessness

0 I do not feel I am worthless.

1 I don't consider myself as worthwhile and useful as I used to.

2 I feel more worthless as compared to other people.

3 I feel utterly worthless.

5. Loss of Energy

0 I have as much energy as ever.

1 I have less energy than I used to have.

2 I don't have enough energy to do very much.

3 I don't have enough energy to do anything.

6. Changes in Sleeping Pattern

0 I have not experienced any change in my sleeping pattern.

1a I sleep somewhat more than usual.

1b I sleep somewhat less than usual.

2a I sleep a lot more than usual.

2b I sleep a lot less than usual.

3a I sleep most of the day.

3b I wake up 1–2 hours early and can't get back to sleep.

17. Irritability

0 I am no more irritable than usual.

1 I am more irritable than usual.

2 I am much more irritable than usual.

3 I am irritable all the time.

18. Changes in Appetite

0 I have not experienced any change in my appetite.

1a My appetite is somewhat less than usual.

1b My appetite is somewhat greater than usual.

2a My appetite is much less than before.

2b My appetite is much greater than usual.

3a I have no appetite at all.

3b I crave food all the time.

19. Concentration Difficulty

0 I can concentrate as well as ever.

1 I can't concentrate as well as usual.

2 It's hard to keep my mind on anything for very long.

3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

0 I am no more tired or fatigued than usual.

1 I get more tired or fatigued more easily than usual.

2 I am too tired or fatigued to do a lot of the things I used to do.

3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

0 I have not noticed any recent change in my interest in sex.

1 I am less interested in sex than I used to be.

2 I am much less interested in sex now.

3 I have lost interest in sex completely.

3 4 5 6 7 8 9 10 11 12 A B C D E

CE:

_____ Subtotal Page 2

_____ Subtotal Page 1

Appendix 8

Life Events' Inventory

The Life Events' Inventory (Cochrane & Robertson, 1973) consists of 48 items describing various life events. The respondent is asked to indicate which, if any, of the events has occurred in the previous six months. A tick indicates an event which has had a perceived positive effect on the respondent's life, whilst negative events are indicated with a cross. In addition, an open-ended question allows the respondent to identify unspecified significant events within the six month time frame, and whether they have had a perceived positive or negative effect.

Life Events Inventory: Please indicate whether any of the following events has happened to you **in the last six months** by placing a **tick** beside an event which had **a good effect** overall on your life, or a **cross** beside any event that you felt had a **bad effect**.

1. Unemployment
2. Trouble with superiors at work or college
3. New job
4. Change in hours or conditions in present job
5. Moving house
6. Purchasing own house (taking out mortgage)
7. New neighbours
8. Quarrel with neighbours
9. Income increased substantially **(25%)**
10. Income decreased substantially **(25%)**
11. Getting into debt beyond means of repayment
12. Going on holiday
13. Conviction for minor violation (e.g. speeding or drunkeness)
14. Jail sentence
15. Involvement in fight
16. Immediate family member starts drinking heavily
17. Immediate family member attempts suicide
18. Immediate family member sent to prison
19. Death of immediate family member
20. Death of close friend
21. Immediate family member seriously ill
22. Gain of new family member (immediate)
23. Problems related to alcohol or drugs
24. Serious restriction of social life

25. Period of homelessness (e.g. sleeping rough or hostel)

26. Serious physical illness or injury

27. Pregnancy (or of partner)

28. Miscarriage

29. Termination of pregnancy

30. Sexual difficulties

31. Marriage

32. Increase in arguments with partner

33. Increase in arguments with other family members (e.g. children)

34. Trouble with other relatives (e.g. in-laws)

35. Son or daughter left home

36. Children in care of others

37. Trouble or behaviour problems in own children

38. Death of spouse or partner

39. Divorce or end of steady relationship

40. Separation from spouse or partner

41. Extra-marital sexual affair

42. Break up of affair

43. Infidelity of spouse or partner

44. Reconciliation with spouse or partner

45. Spouse or partner begins or stops work

46. Taking exams

47. Failing an important exam

48. Valuable possessions lost or stolen

49. Other events (please specify)

50. Other events which have occurred in the past but continue to cause significant distress on a regular basis (please specify)

Appendix 9

Demographic information

Data relating to age, sex, number of years in education, and current occupation was collected (see over).

Age, sex and level of education were subsequently entered into regression analyses (see Appendix 14) to determine their contribution to dissociation.

About yourself:

Your name:

Your GP:*

Are you male or female?

How many years, if any, did you spend in education after the age of sixteen? (Include your years at school and any time at college or university.)

What age are you?

If you are working, what is your occupation?

*The information you give will not be available to anyone other than the researcher. (The only exception to this is if you are currently considering taking your own life. In this event your GP would be contacted.)
You are of course free to discuss the questionnaires with the psychologist you are seeing.
If you are not seeing a psychologist and you find that completing these questionnaires has caused you any distress, you are able to contact Katherine Cheshire, Clinical Psychologist on (0131) 537 6280. She is not directly involved in the research but is aware of the nature of the study.
Your GP will be informed that you have taken part in this study.

Appendix 10

Factor analysis of DES items: A factor analysis of combined responses to the DES and an unpublished 13-item normative dissociation scale, conducted by Dalenberg, Coe, Reto, Aransky, Duvenage & Weber, (1994),gave rise to four factors accounting for 40% of the variance. These factors are of particular interest in this paper because of their reported relationship to attachment styles (Coe, Dalenberg, Arensky and Reto, 1995). For this reason, an attempt was made to use this four-factor model in the present study. They state that two of their factors correspond to two of the three factors identified by Carlson *et al.*, 1991. However, they subdivide Carlson's third factor ("absorption-and-imaginative-involvement") into two distinct factors ("isolation" and "absorption"). Unfortunately, they do not present supporting data, so it is unclear as to which items form each of the factors.

Factor analysis of the relevant DES items in the present study using principal components without rotation gave rise to a two factor solution, with seven items loading on Factor 1 and two items loading on Factor 2 (see below).

Item	Factor One	Factor Two
2. Some people find that they are listening to somebody talk and they suddenly realize that they did not hear part or all of what was said	**.775**	.014
14. ..remembering a past event so vividly that they have the experience of reliving that event	.453	**.590**
15. ..not being sure whether things that they remember happening really did happen	**.836**	.278
16. ..being in a familiar place but finding it strange and unfamiliar	**.912**	.208
17. ..they become so absorbed in TV or a movie that they become unaware of events happening around them	.422	**.630**
18. ..so involved in a fantasy or daydream that they feel as though it was really happening to them	**.822**	.395
20. ..they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time	**.741**	.044
22. ..in one situation they may act so differently compared to another situation that they feel as if they are two people	**.779**	.114
23. ..they are able to do things with amazing ease and spontaneity which would usually be difficult for them	**.749**	.123

Appendix 11

Factor analysis of multi-item measure of social support: the multi-item measure (see Appendix 4) was factor analyzed using extraction based on principal components with no rotation. Full results are presented below:

Item number	Eigenvalue	Percent of variance	Factor 1 loading "openness"	Factor 2 loading "self doubt"
1	5.35	44.6	**.857**	.067
2	1.85	15.4	**.823**	.266
3	1.20	10.1	.362	**.598**
4	0.93	7.8	**.768**	.208
5	0.66	5.5	**.608**	.192
6	0.52	4.4	**.705**	.285
7	0.43	3.6	.335	**.589**
8	0.33	2.8	**.874**	.001
9	0.24	2.0	**.648**	.487
10	0.18	1.5	**.581**	.296
11	0.13	1.1	**.673**	.228
12	0.12	1.0	.279	**.758**

Appendix 12: Relationship of early attachment to current attachment

(Combined sample: early attachment as measured by Parental Bonding Instrument. Current attachment as measured by Bartholemew and Horowitz measure)

	Secure attachment	**Avoidant attachment**	**Preoccupied attachment**	**Fearful attachment**
Care (fathers)	**r = .50** **p = .001**	r = -.22 p > .10	**r = -.44** **p < .005**	**r = -.62** **p < .001**
Care (mothers)	**r = .50** **p = .001**	r = -.15 p > .10	**r = -.46** **p < .005**	**r = -.47** **p = .001**
Over-protection (fathers)	**r = -.57** **p < .001**	r = .05 p > .10	**r = .35** **p < .05**	**r = .53** **p < .001**
Over-protection (mothers)	**r = -.46** **p < .005**	r = .06 p > .10	r = .28 p < .10	**r = .33** **p < .05**

Appendix 13: Correlation table: current attachment by social support strategies

(Combined sample: current attachment as measured by the Bartholemew and Horowitz measure; social support strategy as measured by author's four-prototype instrument)

	Secure attachment	Avoidant attachment	Preoccupied attachment	Fearful attachment
Secure social support	**r = .48** **p = .001**	r = .02 p > .10	r = -.13 p > .10	**r = -.46** **p = .001**
Avoidant social support	**r = -.47** **p = .001**	r = .20 p > .10	r = -.02 p > .10	**r = .34** **p < .05**
Preoccupied social support	**r = .31** **p < .05**	r = -.03 p > .10	r = .22 p > .10	r = -.29 **(p < .10)**
Fearful social support	**r = -.68** **p < .001**	r = .14 p > .10	r = .22 p > .10	**r = .63** **p < .001**

Correlation table: current attachment by multi-item social support measure

(Combined sample: current attachment as measured by the Bartholemew and Horowitz)

	Secure attachment	Avoidant attachment	Preoccupied attachment	Fearful attachment
Openness	**r = .29** **p = .05**	r = .15 p > .10	r = -.13 p > .10	**r = -.45** **p < .005**
Self doubt	**r = -.31** **p < .05**	r = -.22 p > .10	r = .23 p > .10	**r = .40** **p < .01**

Correlation table: early attachment to multi-item social support measure

(Combined sample: early attachment as measured by the Parental Bonding Instrument)

	Paternal care	Paternal over-protection	Maternal care	Maternal over-protection
Openness	**r = .37** **p < .05**	r = -.19 p > .10	r = .15 p > .10	r = -.10 p > .10
Self doubt	**r = -.46** **p < .005**	r = .23 p > .10	**r = -.33** **p > .05**	r = .26 p < .10

Appendix 14: Regression analyses

Stepwise regression analyses were conducted in order to determine the relative contributions of the "background" variables (age, sex, education, mood, negative life events) and the attachment and social support variables to dissociation, as measured by the DES.

(1) Dissociative Experiences Scale (total scores) by background variables

Variables	Multiple *r*	r^2	Beta	Significance
Sex			-.07	.69
Age			-.19	.24
BDI score	.62	.38	.73	.00
Education			.06	.69
Negative life events			.25	.26
Group			.15	.30
Sex			.14	.27
Age			-.19	.20
BDI score	.61	.37	3.64	.00
Education			.07	.62
Group			.24	.25
Sex			.13	.32
Age	.60	.36	-.16	.23
BDI			3.96	.00
Group			.13	.17
Age			-.18	.20
BDI	.58	.34	3.94	.00
Group			.25	.17
BDI	**.56**	**.31**	**.73**	**.0001**
Group			**.33**	**.06**

(2) Dissociative Experiences Scale (isolation factor) by background variables

Variables	Multiple *r*	r^2	Beta	Significance
BDI			.48	.00
Group			.23	.15
Age	.83	.68	-.24	.03
Education			.48	.91
Negative life events			.11	.00
Sex				.28
BDI			.52	.00
Group			.23	.11
Age	.82	.67	-.22	.05
Negative life events			.46	.00
Sex			.08	.41
BDI			.52	.00
Group	.81	.66	.22	.11
Age			-.24	.03
Negative life events			.43	.00
BDI			**.38**	**.00**
Age	**.80**	**.64**	**-.30**	**.00**
Negative life events			**.44**	**.00**

(3) Dissociative Experiences Scale (absorption) by background variables

Variables	Multiple *r*	r^2	Beta	Significance
BDI			.38	.07
Group			.29	.15
Age	.70	.49	-.15	.29
Education			.04	.75
Negative life events			.47	.01
Sex			.17	.18
BDI			.46	.02
Group			.32	.07
Age	.68	.46	-.09	.52
Negative life events			.43	.01
Sex			.14	.29
BDI			.46	.02
Group	.68	.46	.37	.03
Negative life events			.46	.00
Sex			.15	.23
BDI			**.48**	**.01**
Group	**.66**	**.44**	**.37**	**.03**
Negative life events			**.42**	**.00**

(4) Dissociative Experiences Scale (depersonalization / derealization) by background variables

Variables	Multiple *r*	r^2	Beta	Significance
BDI			.33	.05
Group			.03	.85
Age	.83	.70	-.27	.02
Education			.14	.23
Negative life events			.57	.00
Sex			.18	.07
BDI			.31	.01
Age			-.28	.00
Education	.83	.70	.15	.15
Negative life events			.57	.00
Sex			.18	.07
BDI			.32	.01
Age			-.27	.01
Negative life events	.82	.67	.53	.00
Sex			.15	.11
BDI			**.34**	**.00**
Age	**.81**	**.65**	**-.29**	**.00**
Negative life events			**.48**	**.00**

(5) Dissociative Experiences Scale (total) by current attachment, negative life events and BDI score

Variables	Multiple *r*	r^2	Beta	Significance
BDI			.28	.17
Negative life events			-.04	.81
	.63	.40		
Secure attachment			-.01	.97
Avoidant att.mnt			-.03	.86
Preoccupied att.mnt			.30	.04
Fearful attachment			.23	.26
BDI			.28	.12
Negative life events			-.04	.81
Avoidant att.mnt	.63	.40	-.02	.86
Preoccupied att.mnt			.30	.04
Fearful attachment			.24	.13
BDI			.28	.11
Negative life events			-.04	.75
	.63	.40		
Preoccupied att.mnt			.31	.04
Fearful attachment			.23	.13
BDI			.29	.05
	.63	.39		
Preoccupied att.mnt			.29	.03
Fearful attachment			.22	.14
BDI			**.39**	**.01**
	.60	**.36**		
Preoccupied att.mnt			**.34**	**.01**

(6) Dissociative Experiences Scale (isolation) by current attachment, negative life events and BDI score

Variables	Multiple *r*	r^2	Beta	Significance
BDI			.14	.37
Negative life events			.53	.00
Secure attachment	.78	.61	-.08	.65
Avoidant att.mnt			-.01	.94
Preoccupied att.mnt			.24	.92
Fearful attachment			.02	.26
BDI			.15	.32
Negative life events			.53	.00
Secure attachment	.73	.61	-.08	.64
Preoccupied att.mnt			.24	.05
Fearful attachment			.02	.91
BDI			.15	.31
Negative life events			.53	.00
Secure attachment	.78	.61	-.08	.48
Preoccupied att.mnt			.24	.04
BDI			.19	.14
Negative life events	.78	.61	.54	.00
Preoccupied att.mnt			.24	.03
Negative life events	**.76**	**.58**	**.63**	**.00**
Preoccupied att.mnt			**.30**	**.00**

(7) Dissociative Experiences Scale (absorption) by current attachment, negative life events and BDI score

Variables	Multiple *r*	r^2	Beta	Significance
BDI			-.06	.53
Negative life events			.47	.00
Secure attachment	.69	.48	-.13	.53
Avoidant att.mnt			-.09	.53
Preoccupied att.mnt			.19	.16
Fearful attachment			.21	.28
Negative life events			.44	.00
Secure attachment	.69	.47	-.11	.58
Avoidant attachment			-.07	.57
Preoccupied att.mnt			.18	.16
Fearful attachment			.21	.28
Negative life events			.43	.00
Secure attachment	.68	.47	-.07	.70
Preoccupied att.mnt			.19	.14
Fearful attachment			.23	.22
Negative life events	.68	.47	.44	.00
Preoccupied att.mnt			.19	.14
Fearful attachment			.28	.04
Negative life events	**.66**	**.43**	**.46**	**.01**
Fearful att.mnt			**.34**	**.00**

(8) Dissociative Experiences Scale (depersonalization / derealization) by attachment, negative life events and BDI score

Variables	Multiple *r*	r^2	Beta	Significance
BDI			.11	.47
Negative life events			.64	.00
Secure attachment	.79	.62	-.17	.35
Avoidant att.mnt			-.21	.09
Fearful attachment			-.01	.91
			.04	.79
BDI			.11	.47
Negative life events			.64	.00
	.79	.62		
Secure attachment			-.17	.34
Avoidant attachment			-.21	.09
Fearful attachment			.04	.80
BDI			.11	.45
Negative life events			.64	.00
	.78	.62		
Secure attachment			-.20	.14
Avoidant attachment			-.21	.07
Negative life events			**.69**	**.00**
	.78	**.61**		
Avoidant att.mnt			**-.24**	**.03**
Secure attachment			**-.26**	**.03**

(9) Dissociative Experiences Scale (total) by attachment based measure of social support, negative life events and BDI score

Variables	Multiple *r*	r^2	Beta	Significance
BDI			.38	.04
Negative life events			-.02	.92
Secure social support	.57	.32	-.23	.34
Avoidant social support			-.23	.29
Preoccupied social support			.18	.28
Fearful social support			.17	.39
BDI			.39	.02
Secure social support	.57	.32	-.25	.28
Avoidant social support			-.24	.27
Preoccupied social support			.18	.27
Fearful social support			.16	.37
BDI			.44	.00
Secure social support	.56	.31	-.31	.16
Avoidant social support			-.21	.31
Preoccupied social support			.19	.25
BDI	.54	.29	.47	.00
Secure social support			-.25	.24
Avoidant social support			-.27	.18
BDI	.51	.26	.52	.00
Avoidant social support			-.08	.51
BDI	**.50**	**.25**	**.50**	**.00**

(10) Dissociative Experiences Scale (isolation) by attachment based measure of social support, negative life events and BDI score

Variables	Multiple *r*	r^2	Beta	Significance
BDI			.28	.05
Negative life events			.56	.00
Secure social support	.77	.59	-.03	.87
Avoidant social support			.02	.92
Preoccupied social support			.20	.12
Fearful social support			-.05	.75
BDI			.28	.05
Negative life events			.56	.00
Secure social support	.77	.59	-.04	.78
Preoccupied social support			.20	.11
Fearful social support			-.04	.75
BDI			.29	.04
Negative life events			.55	.00
Preoccupied social support	.77	.59	.18	.10
Fearful social support			-.02	.83
BDI			**.28**	**.03**
Negative life events	**.77**	**.59**	**.55**	**.00**
Preoccupied social support			**.19**	**.07**

(11) Dissociative Experiences Scale (absorption) by attachment based measure of social support, negative life events and BDI score

Variables	Multiple *r*	r^2	Beta	Significance
BDI			.16	.35
Negative life events			.40	.02
	.66	.44		
Secure social support			.15	.48
Avoidant social support			-.07	.73
Preoccupied social support			.14	.36
Fearful social support			.27	.13
BDI			.17	.30
Negative life events			.39	.02
	.66	.44		
Secure social support			.20	.25
Preoccupied social support			.15	.31
Fearful social support			.27	.13
BDI			.20	.20
Negative life events			.38	.02
	.65	.42		
Secure social support			.28	.07
Fearful social support			.28	.11
Negative life events			**.47**	**.02**
Secure social support	**.63**	**.40**	**.26**	**.09**
Fearful social support			**.32**	**.06**